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**Maritime
Administration**

An Analysis of U.S. Public Port Profitability and Self-Sufficiency (1985-1994)

June 1997

AN ANALYSIS OF U.S. PUBLIC PORT PROFITABILITY AND SELF-SUFFICIENCY (1985-1994)

Prepared By:

Maritime Administration
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Washington, DC

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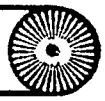

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The author of this report is Oury L. Selig, independent port financial and pricing consultant to MARAD on this project. The database was prepared by Susan Lee of the Office of Ports and Domestic Shipping, who also served as MARAD's project manager.

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The assistance of the various ports that responded to the annual AAPA finance surveys and others who reviewed sections of this report and provided material and expertise during the research phase of the project is gratefully acknowledged.

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[1] Where "U.S. Port Profitability" is used in a caption, it is before the receipt of taxes and contributions unless so stated.

INTRODUCTION

Purpose:

This is the fourth report published by the Maritime Administration (MARAD) analyzing various factors related to public port financing in the United States. The first report was published in June 1974, and the second in June 1985. The third report, ***Public Port Financing in the United States*** (the 1994 Report), was a joint undertaking with the American Association of Port Authorities (AAPA) and was published in July 1994.

The 1994 Report generated great interest in the port industry. It included methodologies to define public port profitability and self-sufficiency. Although rich in information, the profitability analysis was based only on the five-years 1988-1992 and was based solely on port regions.

Scope:

This report further analyzes public port profitability for the ten-year period 1985-1994 and evaluates profitability by port region, size (based on gross operating revenue and net investment in plant, property, and equipment), type of operation, type of governmental agency, and extent of planning.

The financial data were taken from the annual port finance survey reports compiled by AAPA. Other information was provided by a special survey conducted for the 1994 Report, the 1994 Report itself, and updates of the survey.

Definitions and Methodology:

In the 1994 Report, a port was defined as profitable if it had a net profit, i.e., positive net income, without including income from tax levies and contributions, donations, and grants. This definition is used in this study since it is a relatively accurate and uncomplicated method of determining if a port is self-sufficient. The terms profitable and profitability will be used interchangeably with the terms self-sufficient and self-sufficiency in this report.

A port is self-sufficient if it generates enough operating income, interest income, and other income to pay its operations, maintenance, security, sales, administrative, and depreciation expenses without reliance on tax receipts or outside contributions, donations, grants, appropriations, or subsidies. The calculations used to determine port profitability follow this

formula. [An example of individual port analyses for 1992 is found in the 1994 Report on page 136 (Table B-2).]

This formula does not take into consideration off balance sheet payments of bond interest and expense made by a parent governmental body, nor other direct contributions, grants, donations, etc., that are not recorded as contributions in a port's income statement.

It is important to understand that the financial data used to determine port profitability and self-sufficiency are based on an existing database of AAPA annual finance surveys. Ports respond to the annual finance survey on a voluntary basis, and the ten-year database does not include all U.S. public ports, nor does it necessarily include the same ports from year to year. Every effort was used to exclude ports whose annual survey response did not follow generally accepted accounting principles.

Since the ports included in the database from year to year may vary, the results of this study may be subject to some question, except that most ports who respond to the survey have a consistent pattern of historic earnings from year to year. In response to a question on historic earnings in the special 1992 survey, 45 ports reported an historic net profit (after taxes and contributions) and 10 reported a net loss. Forty-five ports also reported the pattern of profit or loss was consistent for the last five years (see page 47 of the 1994 Report).

The total number of responding ports each year has ranged from a low of 40 in 1986 and 1987 to a high of 62 in 1989. The number of ports responding during the three years 1985-1987 averaged 42, whereas the average number of ports responding each year was 57 during the seven-year period 1988-1994. The trend analysis of the data takes into consideration the variance in the number of ports reporting financial data each year.

The methodology calculates annual port profitability and then compares the number of ports showing a net profit before tax receipts and contributions with those showing a net loss. The trend for the ten-year period and the seven-year period is determined using exponential analysis where possible, or linear analysis as an alternative.

Each category analyzed includes a table showing the number of ports having a net profit before taxes and contributions each year, the number of ports having a net loss before taxes and contributions each year, and the total number of ports responding to the AAPA finance survey each year. A bar graph is then constructed from the data in the table.

A second bar graph is produced to show the ten-year trend using regression analysis if enough data are available to show a reliable trend.

In most cases a third bar graph is produced to show the seven-year trend of the period 1988-1994 to discount the effect of the lower average number of survey responses during the first three years of the ten-year study period.

The analysis measures trends that occurred during the ten-year and seven-year periods respectively and do not necessarily reflect port profitability and self-sufficiency for years subsequent to the study period.

Other Performance Measures:

In order to determine if the preceding analysis was correct, the actual financial surveys were analyzed to determine the average operating ratio, the average operating margin, and the average net return on net investment in plant, property, and equipment by port regions for five years of the ten-year period studied. The five years analyzed were:

1985 - The first year of the ten-year period.

1988 - The year that port response to the AAPA finance survey increased by 33%.

1990 - A year when 57% of the ports were considered profitable and self-sufficient.

1992 - The last year of the five-year period studied in the 1994 Report.

1994 - The last year of this ten-year study period.

The operating ratio is determined by dividing the total operating expenses (including general administration expense) by the gross operating revenues. The operating margin is determined by dividing the net operating income by the gross operating revenues.

The net investment in plant, property, and equipment includes the cost of land, buildings, equipment and other improvements, minus their accumulated depreciation. Net return on net investment in plant, property, and equipment has been computed by dividing the net income (before tax receipts and contributions) by the net investment in plant, property, and equipment. The net return has

also been calculated using net income after tax receipts and contributions.

The study was conducted to analyze specifically related categories of ports by region, size, or other factors, and no effort was made to apply the analysis to individual ports.

Three phrases used throughout this report, "ten-year period" (covering 1985-1994), "five-year period" (covering 1988-1992), and "seven-year period" (covering 1988-1994), include the first and last year of the stated period.

Note:

A copy of the 1994 Report, ***Public Port Financing in the United States***, may be obtained from:

U.S. Department of Transportation
Maritime Administration
Office of Ports and Domestic Shipping
400 Seventh Street, SW, Room 7201
Washington, DC 20590

CHAPTER 1

EXECUTIVE SUMMARY

This study of the ten-year period, 1985-1994, is the fourth MARAD study to address the subject of U.S. public port self-sufficiency and profitability. Despite the findings in the 1978 and 1985 reports, there is no evidence that the U.S. public ports are becoming more self-sufficient. To the contrary, this study indicates a decline in port profitability and self-sufficiency during the study period.

In this study a port has been defined as being profitable and self-sufficient if it has a net profit before the collection of taxes and contributions, donations, grants, and subsidies.

With some few exceptions, the study finds a steady decline in the average number of profitable ports during the ten-year study period along with a consistent increase in the average operating ratio, a decrease in the average operating margin, and a steady decline in the net return (before taxes and contributions) on the net investment in plant, property, and equipment for most of the categories studied.

Despite the declining trend in profitability for the ten-year study period, in the year 1994 there were more self-sufficient U.S. public ports (31) than those not self-sufficient (25) responding to the AAPA port finance survey. It is estimated that tax receipts and other contributions, grants, and subsidies were sufficient to enable all but four of the responding ports to have a positive cash flow. The findings in each of the six major categories follows.

Port Regions:

The 1994 Report concluded that the U.S. public ports had not become more self-sufficient over the five-year (1988-1992) period studied. The result of this study of the ten-year period (1985-1994) and the seven-year period (1988-1994) generally supports the 1994 conclusion and indicates a decline in self-sufficiency and profitability for all U.S. port regions. This is not unexpected in view of transportation deregulation, vessel sharing agreements, load centering, and the intensive competition in pricing port services and facilities.

The generally low rate of return (before tax receipts and contributions) on net investment in plant, property, and equipment will not support the high cost of constructing and

rehabilitating port improvements and equipment, except for those ports with a profitable pricing strategy.

The competitive factors may require the future growth of most ports to be funded through taxes and sources other than port revenues. It is vital that all public funds be invested wisely to insure maximum economic activity if the present tax support by state and local port constituents is to be maintained.

Port Size Based on Gross Operating Revenue:

During the ten-year study period (1985-1994) an increase in profitable ports was found in only the two highest gross operating revenue categories of ports with gross operating income between (1) $40 million and $75 million and (2) in excess of $75 million.

Average operating ratios for all revenue categories show an increase over the study period with average operating margins showing a corresponding decrease. Such movement and direction indicate a deteriorating position. Ports with an average gross operating revenue of less than $10 million (approximately 50% of all the ports responding to the finance survey during the study period) have had a negative average operating margin (indicating operating losses) since 1990.

The average net return on net investment (before taxes) in plant, property, and equipment on all of the revenue categories shows a steady decline during the study period. Ports in the revenue category of under $10 million had an average negative return (before taxes) for the last five years of the study period.

Average tax receipts and other contributions were sufficient to eliminate the average negative net return for the under $10 million category in each of the five years.

Port Size Based on Net Investment in Plant, Property, and Equipment:

During the ten-year study period, an increase in profitable ports was found in only the largest net investment category of ports with net investment in plant, property, and equipment in excess of $250 million.

Operating ratios for all investment categories showed an increase over the study period with the exception of ports with a net investment in plant, property, and equipment in excess of $500 million.

In 1994 all of the categories with a net investment of less than $250 million showed an average negative net return (before taxes) on net investment in plant, property, and equipment. Tax receipts and other contributions were sufficient to eliminate the negative net returns for all investment categories except for the "$100 million to $250 million" category.

Type of Operation:

The number of profitable non-operating ports was consistently greater than the number of ports not profitable in each year of the ten-year study period. The non-operating category of ports was also the only group which did not show a declining trend in profitability for the ten-year period. The other two categories, operating and limited operating, showed a declining trend in the number of profitable ports and an increasing trend in non-profitable ports.

Average operating ratios for all categories generally increased over the study period, with average operating margins showing a corresponding decrease. Despite this general observation, the average operating ratio for operating ports was lower in 1994 than they were in 1985.

The average net return (before taxes) for all of the revenue categories declined steadily during the study period. Limited operating ports had an average negative net return (before taxes) in three of the five years analyzed, including 1994. Operating ports had an average net return before taxes of only 0.7% in 1994.

Average tax receipts and other contributions were sufficient to eliminate the average negative net return for the limited operating ports in the years such negative returns occurred.

Type of Governmental Department, Agency, or Authority:

The number of profitable ports that are state departments, agencies, and authorities has increased while the number of unprofitable ports has decreased over the ten-year study period, this despite their average operating ratios increasing by 4%. Their average net return on net investment before taxes decreased slightly from a very low return level in 1985.

County departments and authorities show a mixed trend toward profitability. During the last three years of the study period, only one of three ports reported a profit. The average operating ratio has declined since 1988, but the average net return on net investment before taxes has consistently been in a negative

position. Tax revenue and contributions, on the average, have not been sufficient to create a positive net return on net investment after taxes.

There are more profitable municipal ports than not, but the seven-year trend shows an increase in the average number of unprofitable ports and a decrease in the number of profitable ones. The average operating ratios, operating margins, and net return on net investment before taxes for the municipal agencies are misleading, since three highly profitable South Pacific ports are in this category. For example, the other eight municipal ports would have had an average negative operating margin and cumulative net loss for the year 1994.

Over 50% of the ports responding to the finance surveys each of the ten years were special purpose port/navigation districts. There are more unprofitable port/navigation districts than profitable and both the ten-year and seven-year trends show an increase in the average number of unprofitable ports and a decrease in the profitable ones. This category of ports receives the highest average amount of taxes and other support.

Extent of Planning:

It is not surprising that ports with a strong emphasis on long range planning appear to be more profitable and self-sufficient than ports that do limited or no planning. Strategic planning alone, however, does not seem sufficient to guarantee profitability. The limited amount of data makes it impossible to do any meaningful trend analysis.

CONCLUSIONS

In today's economic climate it is doubtful that there will be any change in the port management philosophy of maximizing economic activity in the regions the port serves.

Many ports will continue to follow past practices of cross-subsidizing marine terminal operations, receiving state or local government assistance for developmental costs, and using the local port ad valorem tax base to obtain new funds for the development of new port facilities and, in some cases, for port operations and maintenance expenses.

Each U.S. public port has a state or local constituency. Each port must satisfy its constituents that the economic impact

generated by port activities is sufficient to warrant continued legislative or taxpayer support.

As long as port operations and facility development can be cross-subsidized, funded by state or local governments, or local taxpayers, ports having such financial assistance will continue to compete with other regional ports. Their pricing strategies will not produce net income before taxes and contributions sufficient to cover all port costs and produce a reasonable rate of return.

Those ports with tax support, or other contributions and subsidies, must build and operate facilities to produce a reasonable rate of return in order to justify the continued support of their constituencies.

Effective regional marine terminal conference pricing may be recognized as important, and utilized, if outside financial assistance enjoyed by ports in some port regions is reduced or eliminated.

Financing of new or improved port facilities from a combination of port revenues and revenue bonds will be extremely difficult for all but the most profitable ports.

CHAPTER 2

PORT PROFITABILITY BY PORT REGION

Summary:

The 1994 Report concluded that the U.S. public ports had not become more self-sufficient over the five-year (1988-1992) period studied. The result of this study of the ten-year period 1985-1994) and the seven-year period (1988-1994) generally supports the 1994 conclusion and indicates a decline in self-sufficiency and profitability for all U.S. port regions. This is not unexpected in view of transportation deregulation, vessel sharing agreements, load centering, and the intensive competition in pricing port services and facilities.

The generally low rate of return (before tax receipts and contributions) on net investment in plant, property, and equipment will not support the high cost of constructing and rehabilitating port improvements and equipment, except for those ports with a profitable pricing strategy.

The competitive factors may require the future growth of most ports to be funded through taxes and sources other than port revenues. It is vital that all public funds be invested wisely to insure maximum economic activity if the present tax support of state and local port constituents is to be maintained.

All U.S. Ports:

The analysis of the financial results for all reporting U.S. ports for the ten-year period 1985-1994 shows a decline in profitability. During the four-year period 1985-1988, ports defined as profitable exceeded 60% of the ports reporting each year. During the years 1989-1994 the profitable ports exceeded 60% only in the year 1991 and dropped below 50% in the years 1992 and 1993. Table 2.1 shows the totals for all U.S. ports reporting, by year, for the ten-year period ending 1994.

Figure 2.1 is a bar chart illustrating the data for all U.S. ports shown in Table 2.1. Figure 2.2 shows a slight downward trend in the number of profitable ports and a pronounced upward trend for ports not considered profitable for the ten-year period.

Since the number of U.S. ports responding to the AAPA finance survey increased in the year 1988, a trend analysis was done for all responding U.S. ports for the seven-year period 1988-1994.

Table 2.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
TOTAL - ALL U. S. PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	14	31	45
1986	14	26	40
1987	13	27	40
1988	22	38	60
1989	27	35	62
1990	24	32	56
1991	19	33	52
1992	31	27	58
1993	31	26	57
1994	25	30	55

Figure 2.1

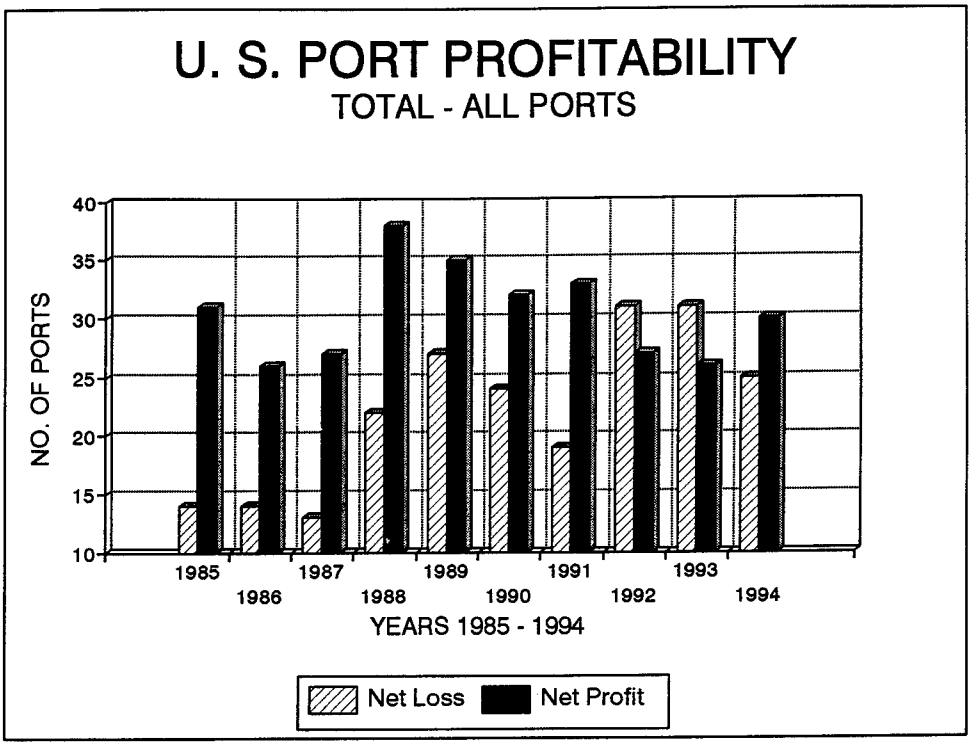


Figure 2.2

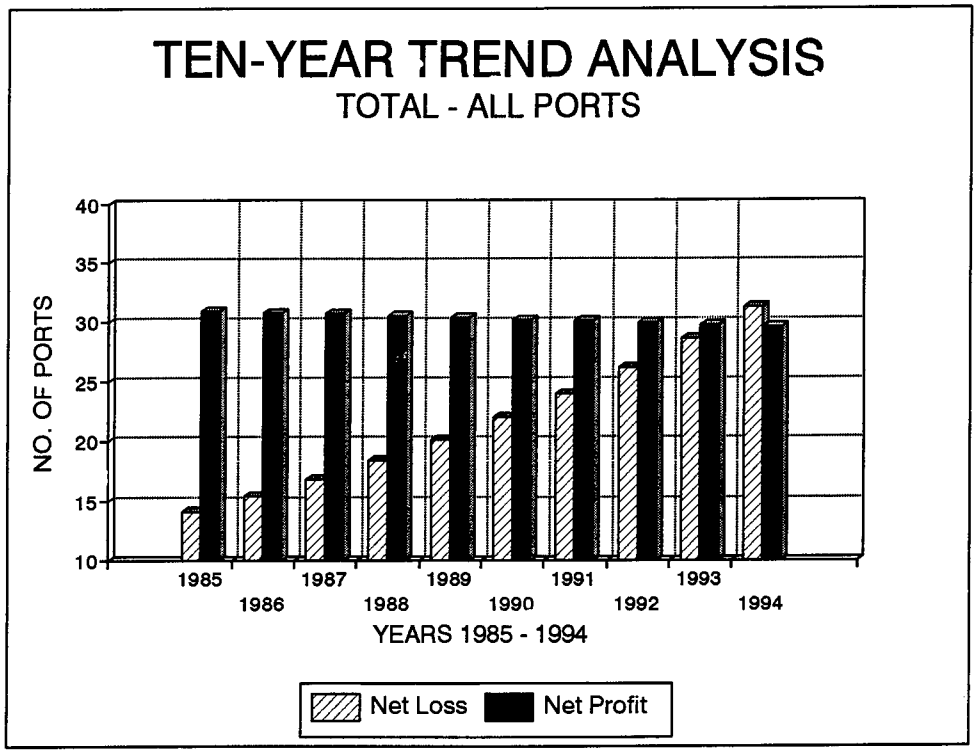
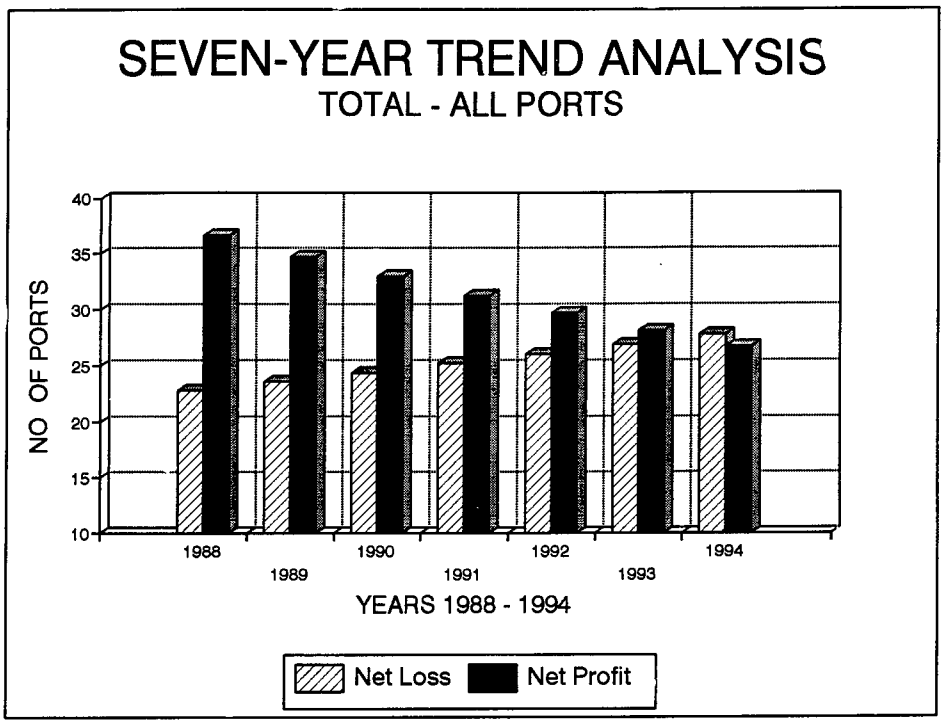


Figure 2.3



This trend analysis is graphed in Figure 2.3 and shows the same trend direction with a more noticeable deterioration in the trend of profitability.

When the port profitability was analyzed for the 1994 Report, no trend analysis was completed for the five-year (1988-1992) period reviewed. The trend analysis for this period is graphed in Figure 2.4, and the downward trend in profitability is consistent with the other periods analyzed.

North Atlantic Ports:

The analysis of the financial results for the reporting North Atlantic ports for the ten-year period 1985-1994 shows a decline in profitability. Table 2.2 shows the totals for all North Atlantic ports reporting, by year, for the ten-year period ending in 1994.

Figure 2.5 is a bar chart illustrating the data for all North Atlantic ports shown in Table 2.2. Figure 2.6 shows the downward trend of profitable ports and the upward trend for ports not considered profitable for the ten-year period.

Although the number of North Atlantic ports responding to the AAPA finance survey fluctuated from four to eight in the ten-year period, for consistency, a trend analysis was also completed for the responding North Atlantic ports for the seven-year period 1988-1994. This trend analysis is graphed in Figure 2.7 and shows the same trend direction.

It is necessary to point out that four of the major North Atlantic ports report no interest expense on their response to the AAPA port finance survey, which suggests that these ports do not allocate interest on debt to their marine operations or that the debt is not the responsibility of the port authority or agency. The debt may be that of the state or the owning governmental agency.

The North Atlantic region comprises the public ports ranging from the State of Maine through Delaware and the Port of Richmond, Virginia.

Figure 2.4

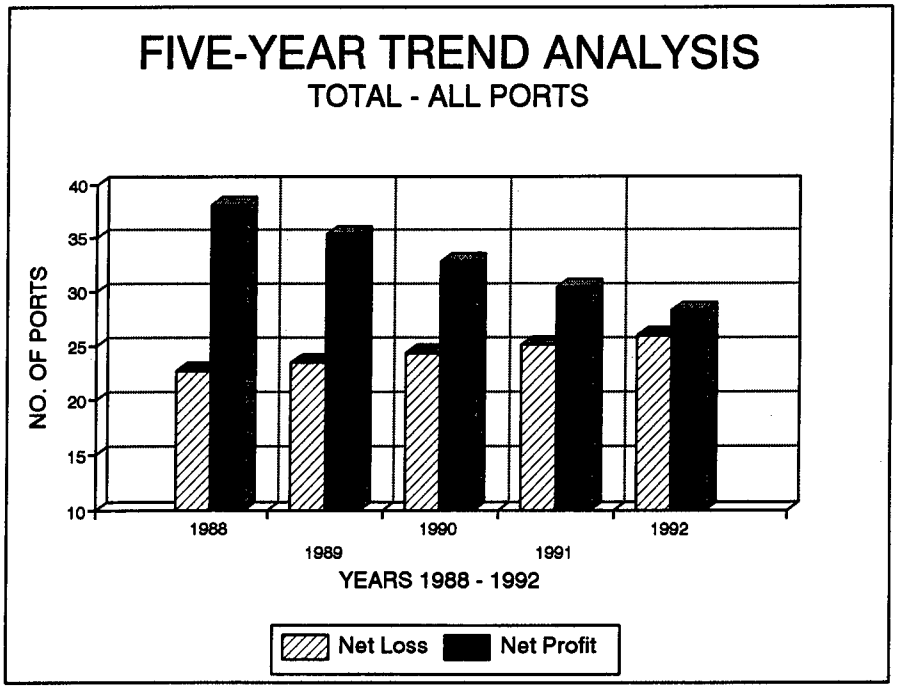

FIVE-YEAR TREND ANALYSIS
TOTAL - ALL PORTS
NO. OF PORTS
40
35
30
25
20
15
10
1988
1989
1990
1991
1992
YEARS 1988 - 1992
Net Loss
Net Profit

Table 2.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NORTH ATLANTIC PORTS
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	4	6
1986	3	1	4
1987	3	1	4
1988	3	3	6
1989	5	3	8
1990	2	4	6
1991	3	1	4
1992	5	2	7
1993	5	0	5
1994	3	3	6

Figure 2.5

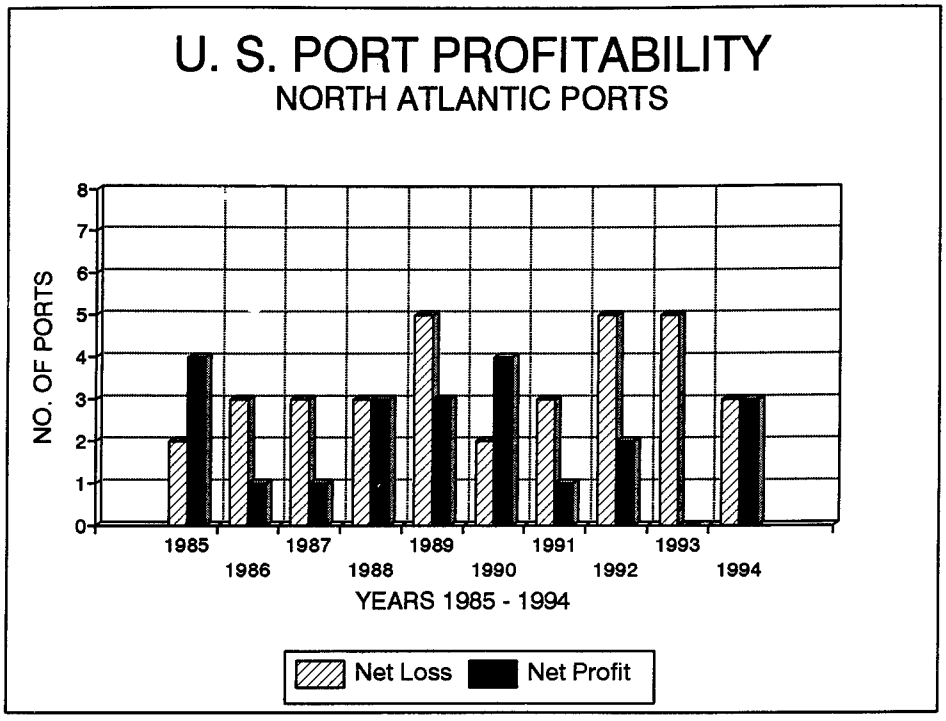
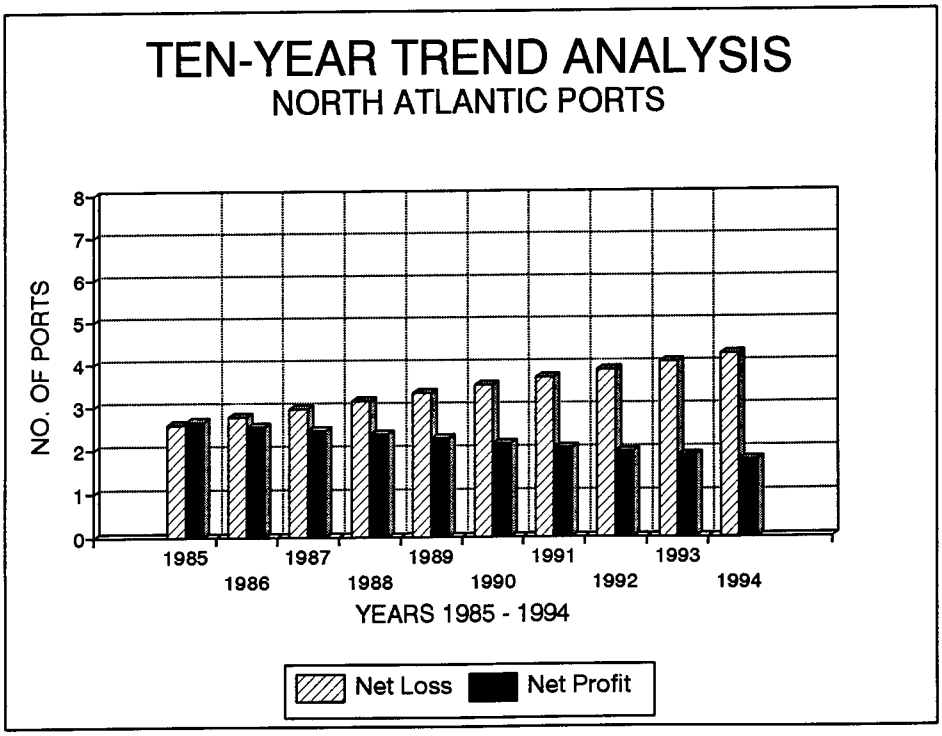


Figure 2.6



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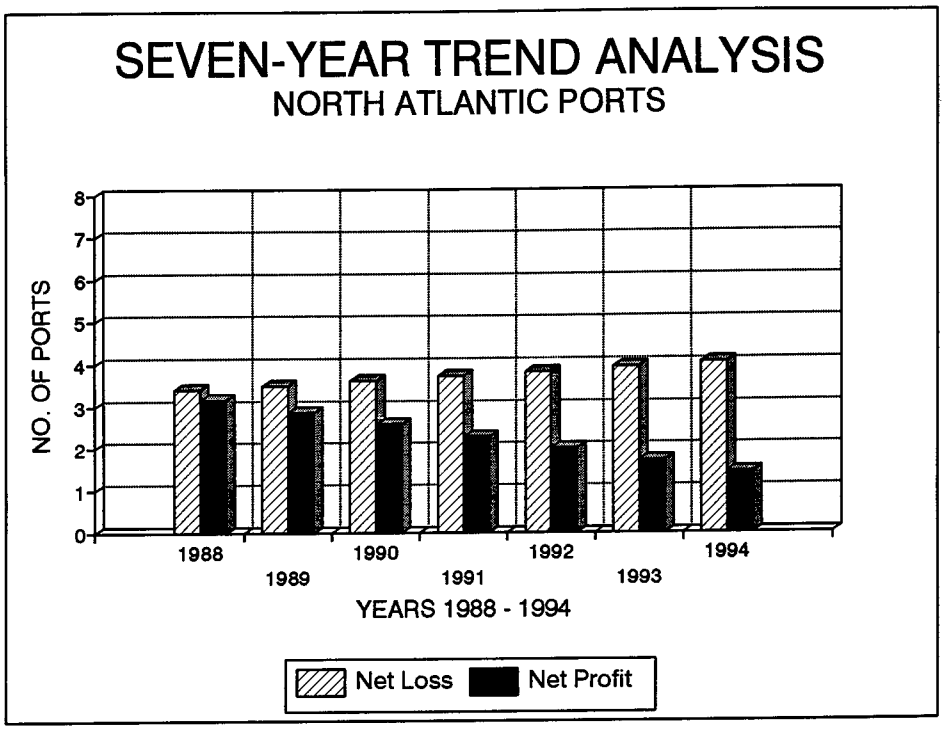


South Atlantic Ports:

The analysis of the financial results for the reporting South Atlantic ports for the ten-year period 1985-1994 shows a high degree of consistency in profitability. Table 2.3 shows the totals for all South Atlantic ports reporting for each of the years in the ten-year period ending in 1994.

Figure 2.8 is a bar chart illustrating the data for all South Atlantic ports shown in Table 2.3. Figure 2.9 shows a consistent trend of profitable ports and an upward trend for ports not considered profitable for the ten-year period. This indicates that as the number of reporting ports increases, the increase is in ports not considered profitable.

The number of South Atlantic ports responding to the AAPA finance survey increased in the last seven years. A trend analysis for the responding South Atlantic ports for the seven-year period 1988-1994 is graphed in Figure 2.10 and shows a shift in trend direction. The seven-year trend shows only a minor decline in profitability as well as a slight decline in ports not considered profitable.

It appears that, although the South Atlantic ports do not demonstrate increased profitability and self-sufficiency, statistically there is a high degree of stability.

The South Atlantic region comprises the public ports ranging from the State of Virginia (excluding Richmond) through the east coast of Florida and includes Puerto Rico and the U.S. Virgin Islands.

Gulf Ports:

The analysis of the financial results for the reporting Gulf ports for the ten-year period 1985-1994 shows a decline in profitability. Table 2.4 shows the totals for all Gulf ports reporting for the ten-year period ending 1994.

Figure 2.11 is a bar chart illustrating the data for all Gulf ports shown in Table 2.4. Figure 2.12 shows the downward trend in profitable ports and the marked upward trend for ports not considered profitable for the ten-year period.

The number of Gulf ports responding to the AAPA finance survey has also increased in the last seven years. A trend analysis for the responding Gulf ports for the seven-year period 1988-1994 is graphed in Figure 2.13. It shows an accelerated downward trend direction in profitable ports and a lesser upward trend in ports not considered profitable.

Table 2.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
SOUTH ATLANTIC PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	0	8	8
1986	2	5	7
1987	2	6	8
1988	4	6	10
1989	5	6	11
1990	3	8	11
1991	1	9	10
1992	3	8	11
1993	4	6	10
1994	4	5	9

Figure 2.8

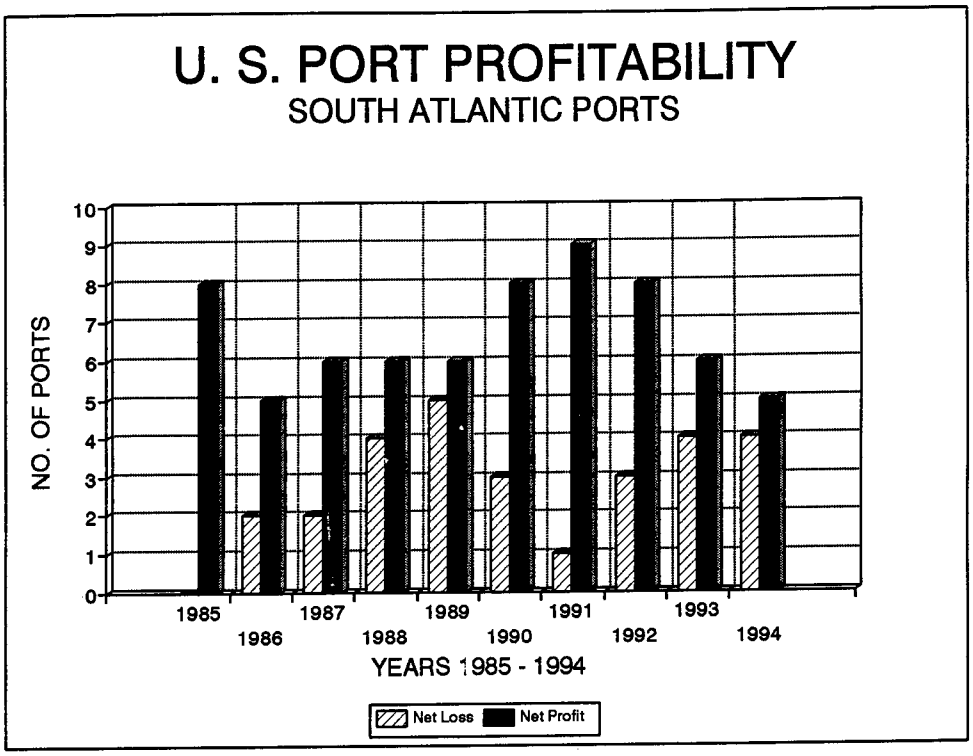
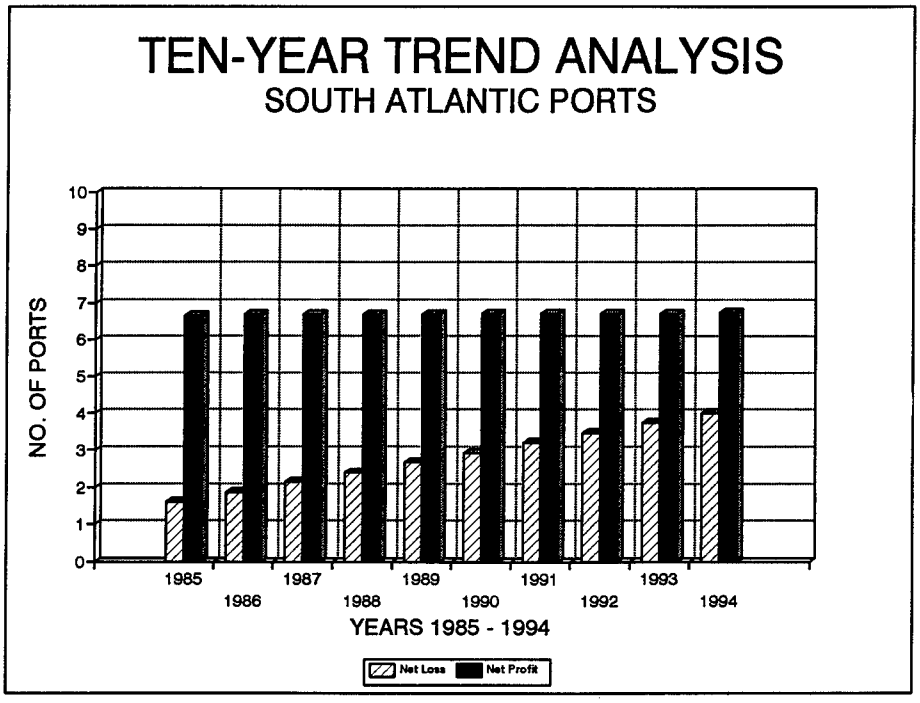


Figure 2.9



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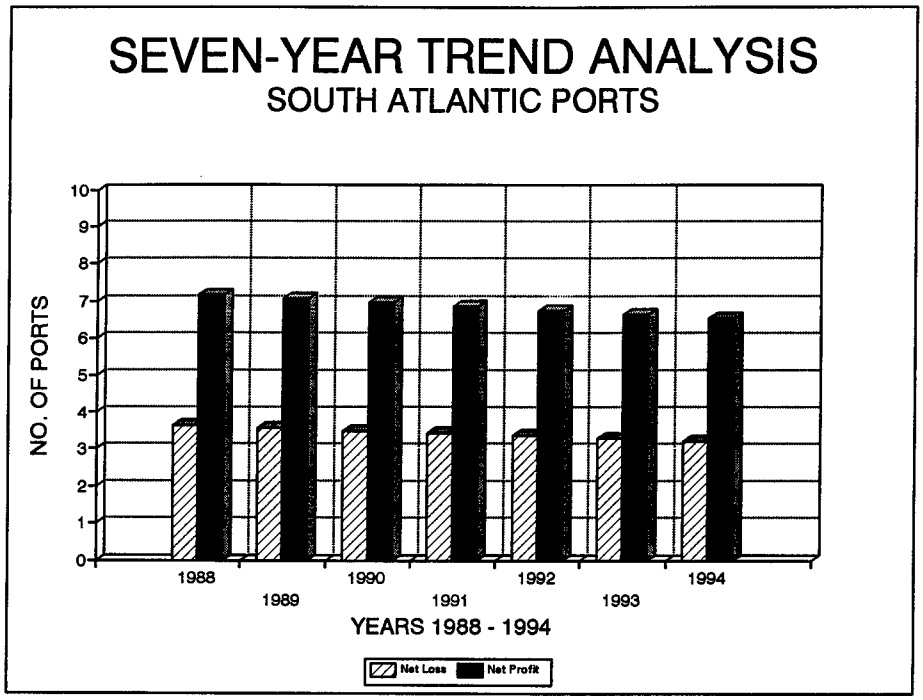
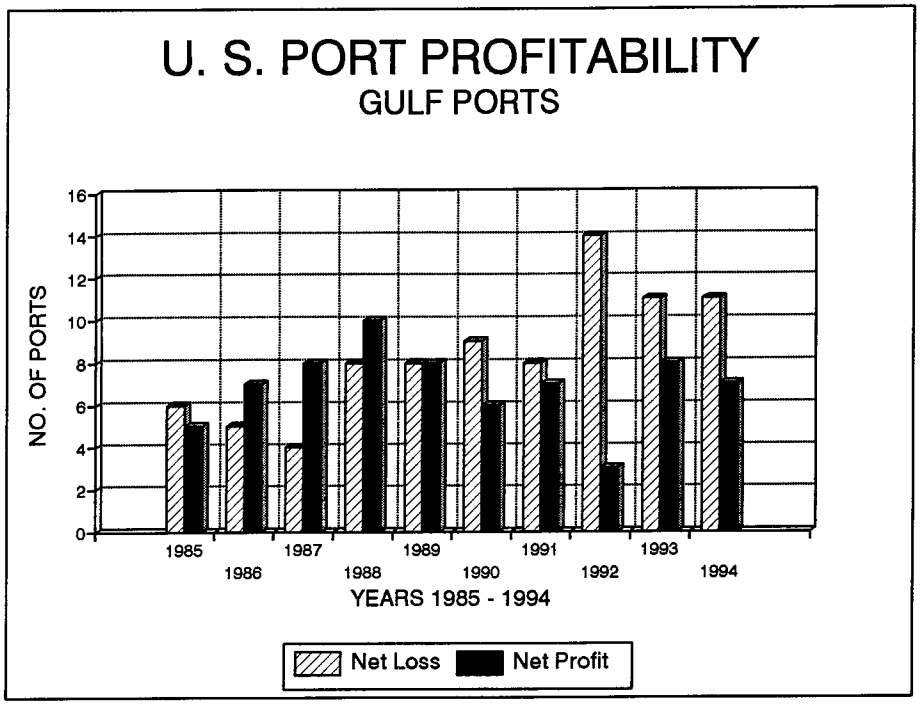


Table 2.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GULF PORTS

Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	6	5	11
1986	5	7	12
1987	4	8	12
1988	8	10	18
1989	8	8	16
1990	9	6	15
1991	8	7	15
1992	14	3	17
1993	11	8	19
1994	11	7	18

Figure 2.11



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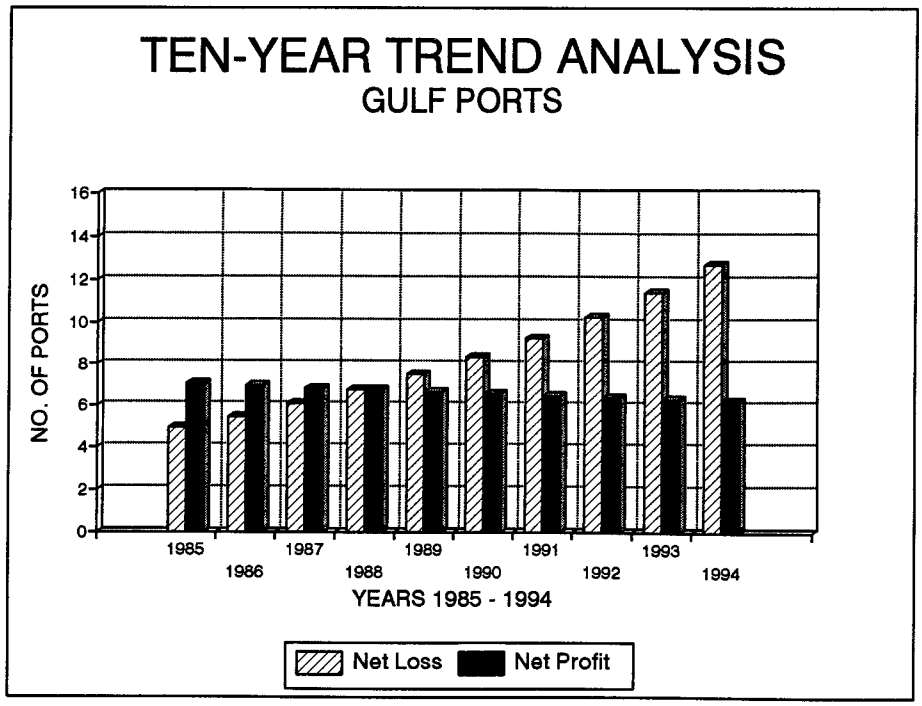
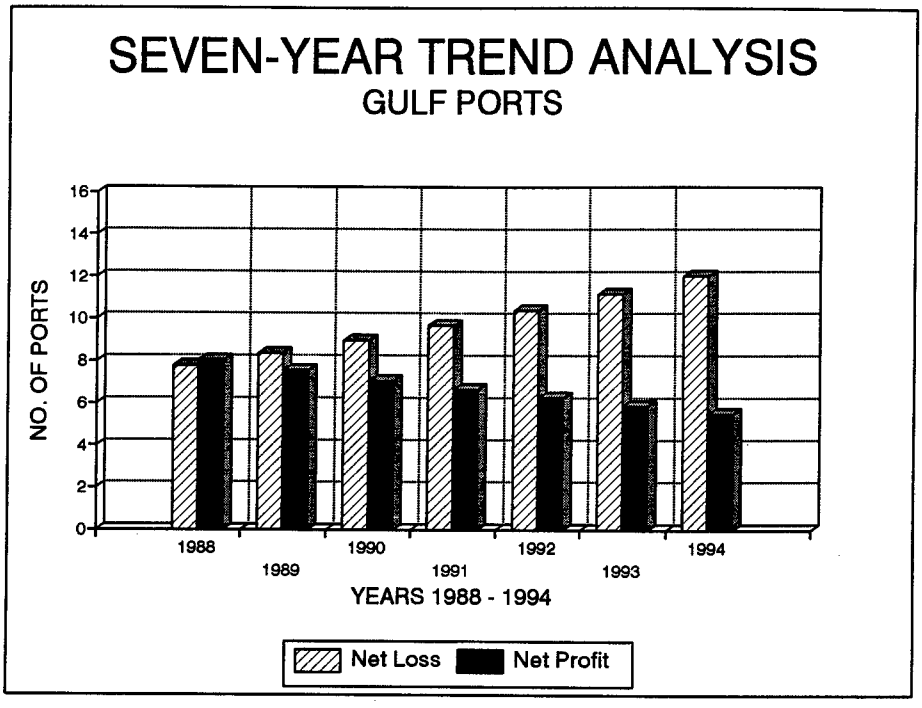


Figure 2.13



The Gulf region comprises the public ports ranging from the west coast of Florida through the State of Texas.

North Pacific Ports:

The analysis of the financial results for the reporting North Pacific ports for the ten-year period 1985-1994 shows an increase in profitability. Table 2.5 shows the totals for all North Pacific ports reporting, by year, for the ten-year period ending 1994.

Figure 2.14 is a bar chart illustrating the data for all North Pacific ports shown in Table 2.5. Figure 2.15 shows both an upward trend of the number of profitable ports and an upward trend for ports not considered profitable for the ten-year period. Table 2.5 shows both a slight increase in the number of profitable ports with a larger increase in ports not considered profitable. These increases are reflected in the trend lines in Figure 2.15.

There was a substantial increase in the number of North Pacific ports responding to the AAPA finance survey in the seven-year period 1988-1994. It was therefore necessary to analyze the trend of the North Pacific ports for the seven-year period. This trend analysis is graphed in Figure 2.16 and shows a change to a downward direction in the number of profitable ports as well as a downward trend in ports not considered profitable. This change in the trend for the seven-year period 1988-1994 is occasioned by the fact that there was only one port not considered profitable reporting in each of the years 1985, 1986, and 1987. Table 2.5 shows an increased number of profitable ports (eight) reporting in the year 1988 and a lesser number in each of the succeeding years. Despite the downward trend line in the number of ports considered profitable shown in Figure 2.16, there has been a high consistency in the number of profitable ports in the North Pacific since 1989.

The North Pacific Region comprises public ports in Oregon, Washington, and Alaska.

Table 2.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NORTH PACIFIC PORTS
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	1	6	7
1986	1	4	5
1987	1	3	4
1988	3	8	11
1989	5	7	12
1990	5	7	12
1991	3	7	10
1992	3	7	10
1993	7	5	12
1994	2	7	9

Figure 2.14

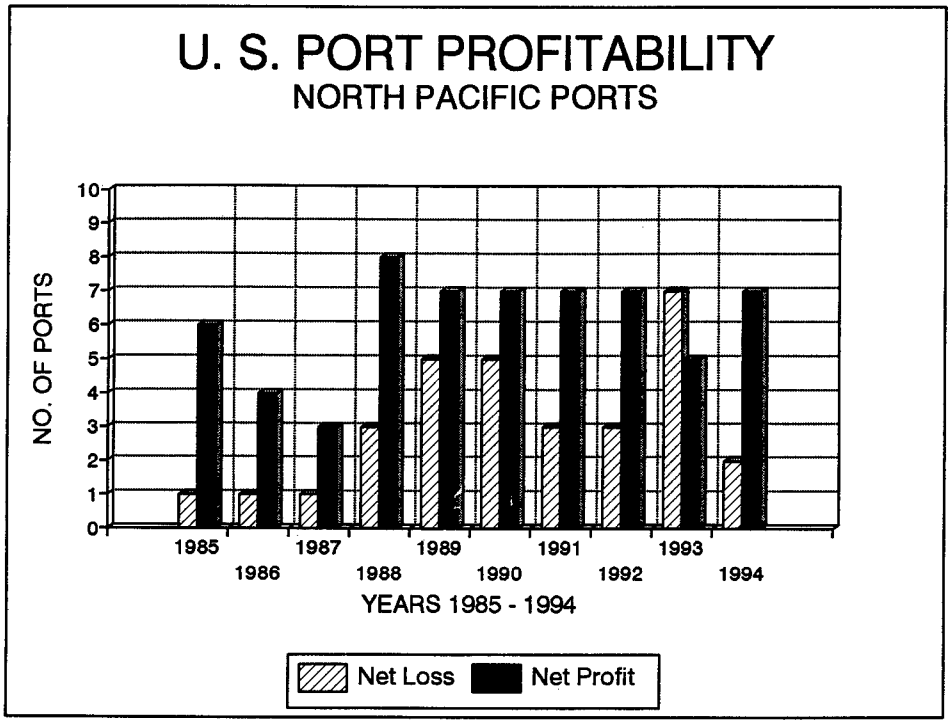


Figure 2.15

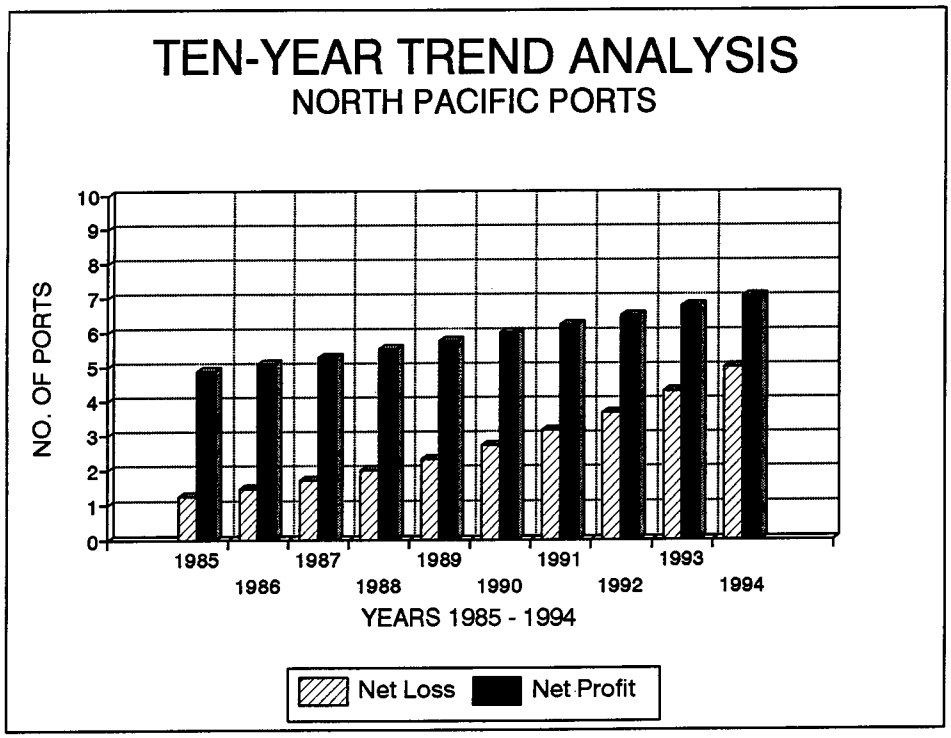
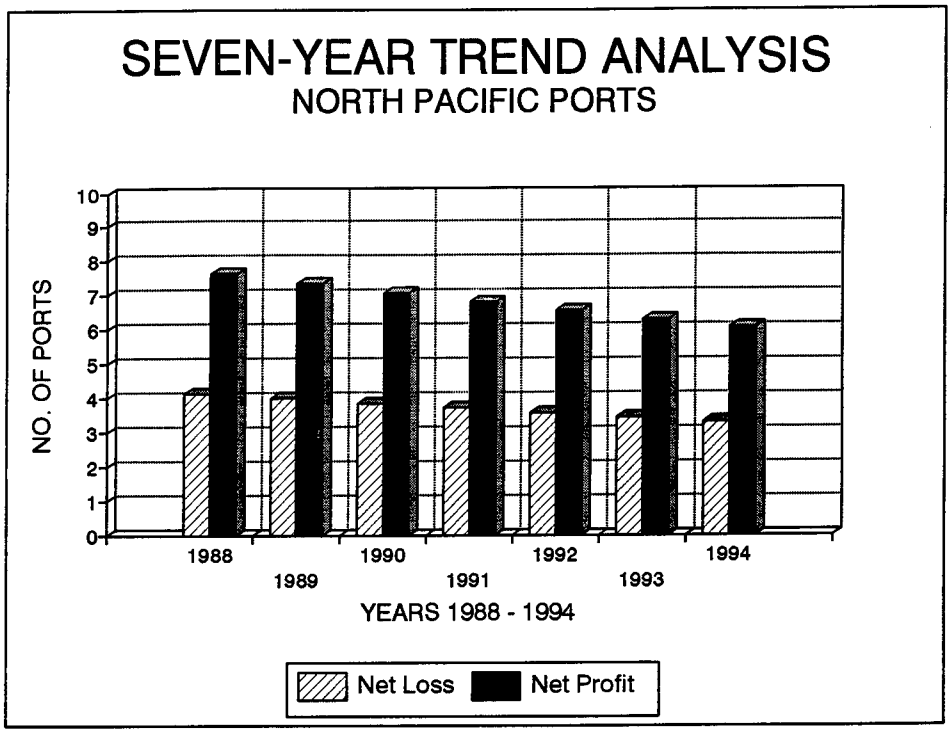


Figure 2.16



South Pacific Ports:

The analysis of the financial results for the reporting South Pacific ports for the ten-year period 1985-1994 shows a slight decrease in profitability. Table 2.6 shows the totals for all South Pacific ports reporting for the ten-year period ending 1994.

Figure 2.17 is a bar chart illustrating the data for all South Pacific ports shown in Table 2.6. Figure 2.18 shows a slight declining trend in the number of profitable ports and a slight upward trend for ports not considered profitable for the ten-year period. Table 2.6 shows a fluctuation in the number of profitable ports during the ten-year period. There is only a slight increase in ports not considered profitable. These fluctuations are reflected in the trend lines in Figure 2.18.

A trend analysis was also performed for the seven-year period 1988-1994. The results are found in Figure 2.19. The fact that ten ports were judged to be profitable in the years 1988 and 1989 results in the accelerated downward trend in the number of profitable ports shown in Figure 2.19. There is no acceleration in the trend line for ports not considered to be profitable.

The South Pacific region comprises the public ports of California, Hawaii, Guam, and Saipan.

U.S. Great Lakes Ports:

The analysis of the financial results for the reporting U.S. Great Lakes ports for the ten-year period 1985-1994 is shown in Table 2.7. Figure 2.20 is a bar chart illustrating the data for the Great Lakes ports shown in Table 2.7. Figure 2.21 shows the trend in the number of profitable ports and ports not considered profitable for the ten-year period. Figure 2.22 shows the trend in the number of profitable ports and ports not considered profitable for the seven-year period 1988-1994. The small numbers of U.S. Great Lakes ports responding to the AAPA finance survey during the ten-year period examined does did not provide sufficient data to make any reliable trend estimates.

The U.S. Great Lakes region comprises all of the public ports ranging from the Great Lakes through the St. Lawrence Seaway.

Table 2.6
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
SOUTH PACIFIC PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	7	9
1986	2	7	9
1987	2	7	9
1988	2	10	12
1989	2	10	12
1990	3	7	10
1991	2	9	11
1992	4	5	9
1993	3	6	9
1994	3	8	11

Figure 2.17

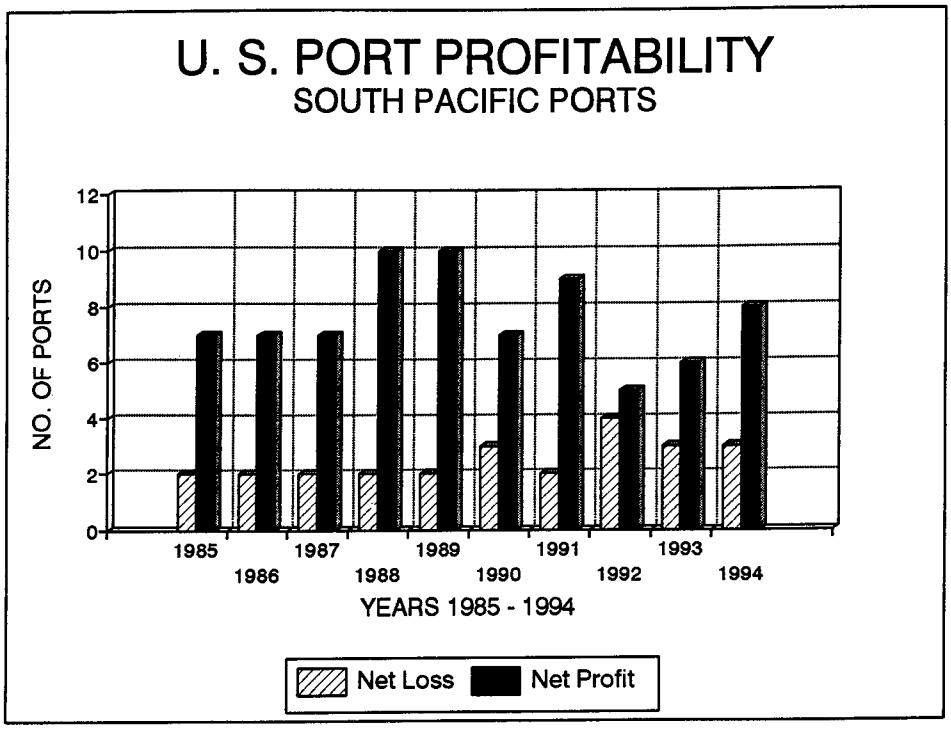


Figure 2.18

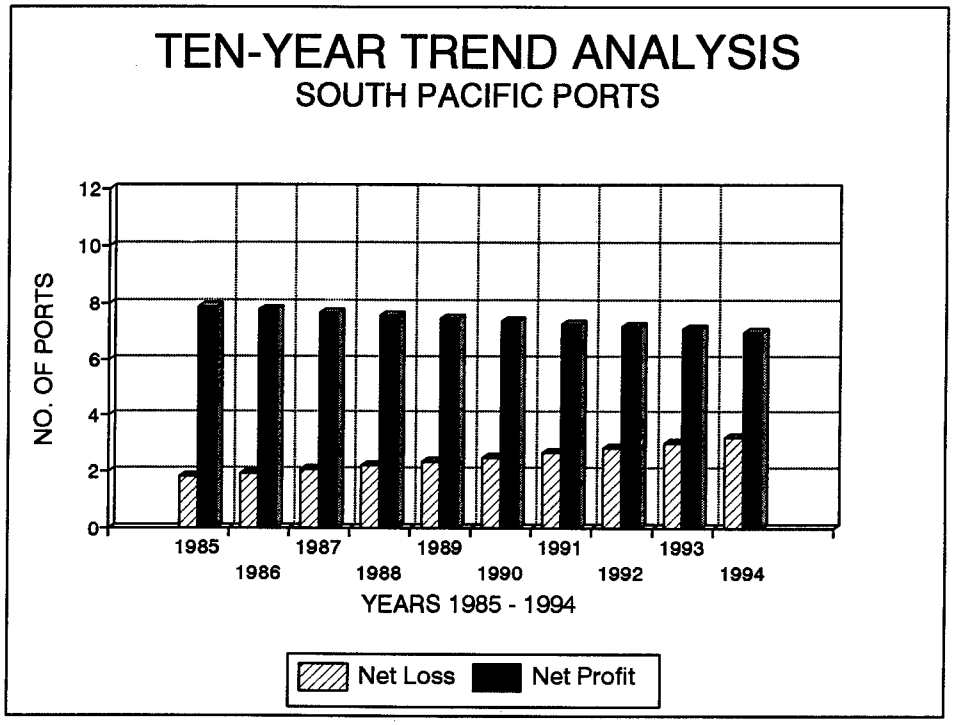


Figure 2.19

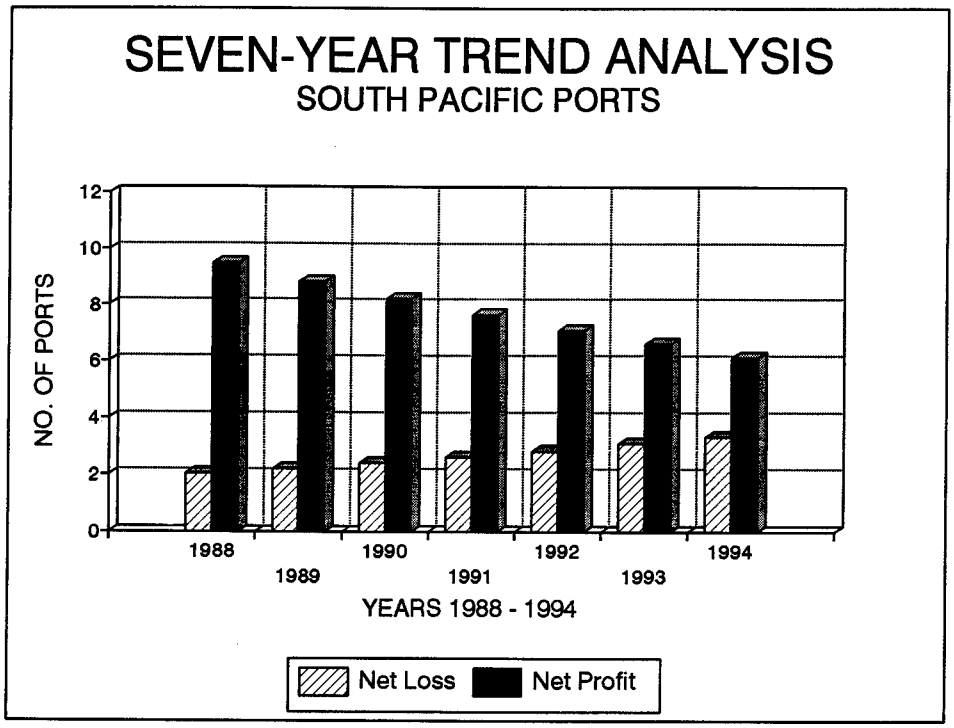


Table 2.7
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GREAT LAKES PORTS
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	3	1	4
1986	1	2	3
1987	1	2	3
1988	2	1	3
1989	2	1	3
1990	2	0	2
1991	2	0	2
1992	2	2	4
1993	1	1	2
1992	2	0	2

Figure 2.20

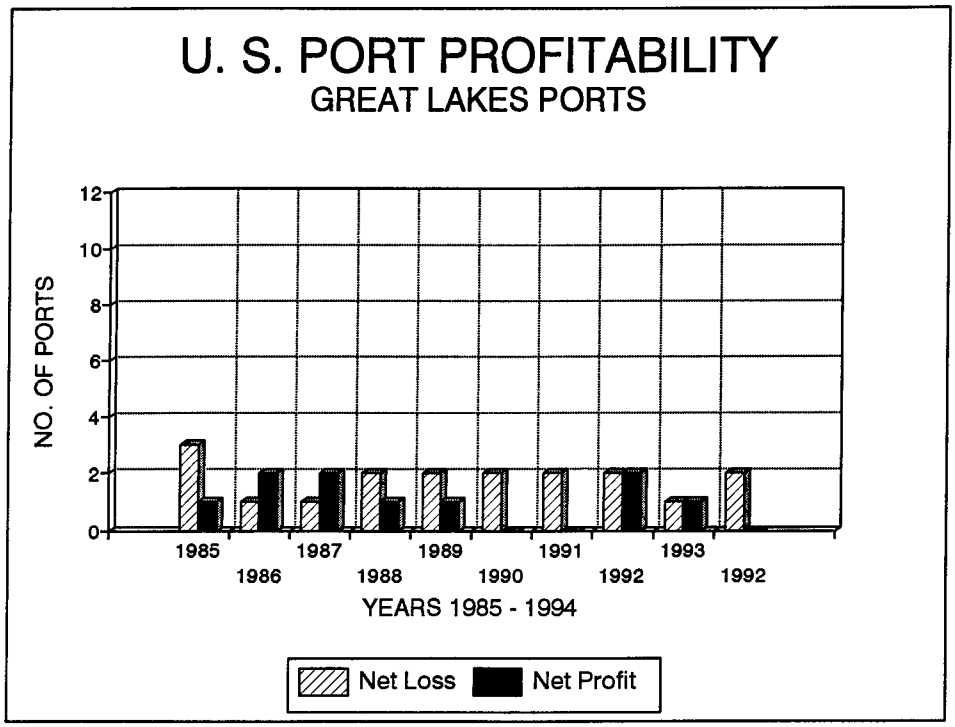


Figure 2.21

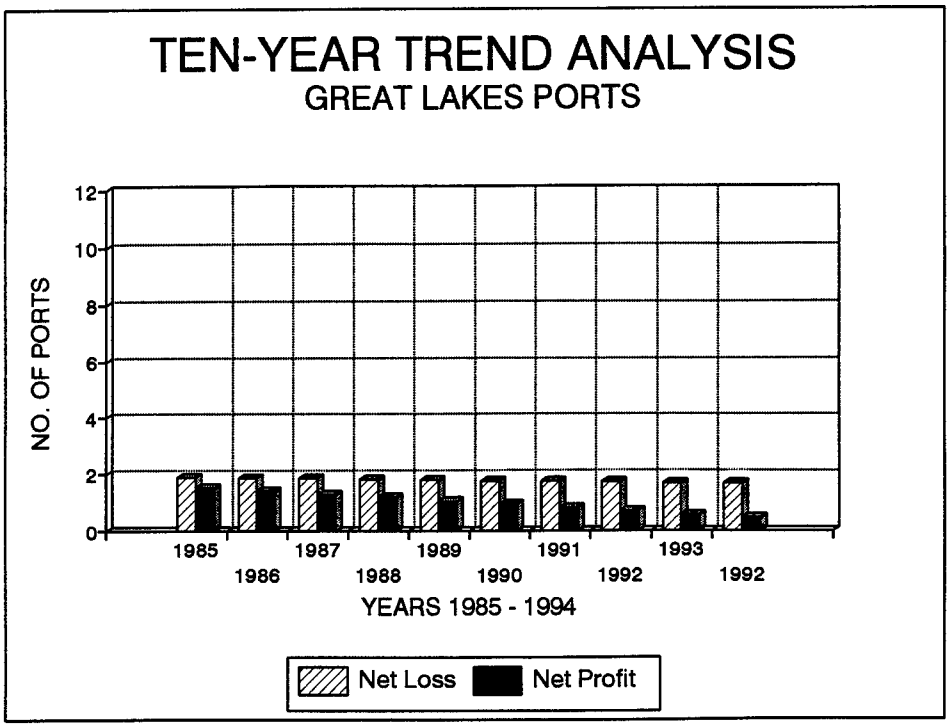
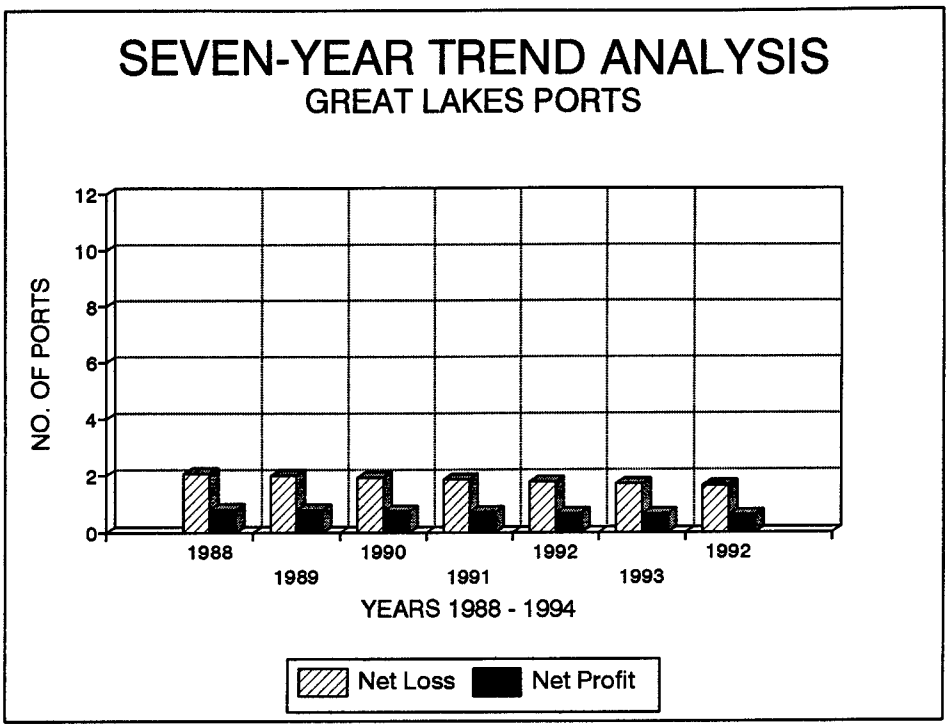


Figure 2.22



Operating Ratio and Operating Margin Analysis:

The operating ratio for each of the port regions and for all ports is shown in Table 2.8. The operating ratios show a general increasing trend for all ports (the average of all reporting ports) and for all regions except for the Gulf and the South Pacific. The operating margins shown in Table 2.9 indicate a decreasing trend with the Gulf and the South Pacific as exceptions.

In three of the five years analyzed the Gulf ports had the same average operating ratio (94%) and operating margin (6%). In the other two years the average operating ratios were greater and the average operating margins were less. It must be pointed out, however, that this range of operating ratios and margins did not sustain profitable, self-sufficient operations for a majority of the responding Gulf ports after 1988.

In only one of the five years analyzed did the average operating ratio for the South Pacific port region reach 60% (1994), and in that year the average operating margin fell to 40%. This remarkable achievement is influenced by the continuous highly profitable operations of four major ports in the region (three city owned and one state owned) which produced 72% of the region's net income before tax receipts and contributions in 1985, 76% in 1988, 99% in 1990, 102% in 1992 and 114% in 1994. The other South Pacific ports had cumulative net losses in 1992 and 1994.

The relationship of these same four South Pacific ports to all U.S. ports responding to the AAPA survey for the five years analyzed was 48% of the net income before tax receipts and contributions in 1985, 75% in 1988, 74% in 1990, 102% in 1992 and 155% in 1994.

The average operating ratio for the South Pacific port region ranged from 55% to 60% and an average operating margin of 40% to 45%. The South Pacific ports were consistently the most profitable ports during the ten-year period studied, primarily because of the profitability of four ports in the region.

Table 2.8
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING RATIO - BY PORT REGION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	77%	84%	82%	81%	84%
North Atlantic	79%	117%	91%	109%	113%
South Atlantic	84%	88%	91%	85%	90%
Gulf	94%	94%	98%	96%	94%
North Pacific	79%	95%	91%	85%	94%
South Pacific	59%	55%	56%	56%	60%
Great Lakes	100%	93%	143%	106%	192%

Table 2.9
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING MARGIN - BY PORT REGION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	23%	16%	18%	19%	16%
North Atlantic	21%	-17%	9%	-9%	-13%
South Atlantic	16%	12%	9%	15%	10%
Gulf	6%	6%	2%	4%	6%
North Pacific	21%	5%	9%	15%	6%
South Pacific	41%	45%	44%	44%	40%
Great Lakes	0%	7%	-43%	-6%	-92%

Net Return on Net Investment in Plant, Property, and Equipment:

The average net return (before tax receipts and contributions) on net investment in plant, property, and equipment for all of the U.S. ports responding to the AAPA surveys shows a decline from 3.4% in 1985 to 1.3% in 1994 (see Table 2.10). The South Pacific reflected a decline from 7.3% in 1985 to 4.6% in 1994 despite the positive influence of the four highly profitable ports. All of the other port regions experienced a decline, with only the North Pacific ports still showing a positive net return.

In evaluating the net return before taxes and contributions, consideration must be given to the fact that generally accepted accounting principles during the ten-year period required that most grants, contributions, and donations be accounted for as contributed capital and not be treated as income on a port financial statement. The effect of the accounting treatment would be to capitalize any contributions or debt service payments made directly by state or local governments.

Table 2.11 indicates net return (after taxes and contributions) on the net investment in plant, property, and equipment. Total tax receipts and contributions for all responding U.S. ports for the five-years analyzed were ($000):

Year	No. Ports	Taxes	Contributions	Total
1985	45	$29,651	$13,341	$42,992
1988	60	48,970	19,287	68,257
1990	56	71,331	19,401	90,732
1992	58	46,670	48,616	95,286
1994	55	49,228	22,323	71,551

The revenue provided from tax receipts and contributions was generally sufficient to turn the average net return from a negative percentage to a positive one with the exception of the North Atlantic ports. The decrease in the average return after taxes for the South Pacific ports in 1994 is the result of one port reporting a payment to its owning governmental entity as a negative contribution. Although the average net return after taxes for all responding U.S. ports generally declined from 1985 to 1994, the Gulf, North Pacific, and Great Lakes show an increase.

Table 2.10
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY PORT REGION

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	3.4%	2.6%	2.7%	2.0%	1.3%
North Atlantic	21.0%	-2.1%	1.2%	-2.4%	-2.9%
South Atlantic	4.4%	0.8%	2.3%	1.4%	-0.4%
Gulf	-0.1%	0.7%	-0.1%	-0.8%	-0.3%
North Pacific	1.5%	0.1%	0.6%	1.6%	1.2%
South Pacific	7.3%	7.4%	8.5%	6.7%	4.6%
Great Lakes	0.2%	0.5%	-3.1%	1.1%	-3.7%

Table 2.11
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY PORT REGION

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	4.2%	3.4%	3.8%	3.2%	2.1%
North Atlantic	2.6%	-2.0%	1.0%	-1.7%	-2.1%
South Atlantic	4.8%	1.8%	3.3%	2.2%	0.3%
Gulf	0.2%	1.9%	1.0%	2.1%	2.3%
North Pacific	0.5%	3.4%	3.5%	4.1%	3.0%
South Pacific	7.6%	7.5%	8.6%	6.7%	4.3%
Great Lakes	2.1%	2.0%	-2.6%	1.6%	4.2%

Cash Flow:

No detailed analysis of cash flow was performed. However, after depreciation expense was added back to net income (after tax receipts and contributions), only a small number of responding U.S. ports showed a net loss before depreciation for the five-year analysis period. The number of ports by year is reflected below:

Year	No. Ports
1985	4
1988	6
1990	7
1992	4
1994	4

CHAPTER 3

PORT PROFITABILITY BY PORT SIZE BASED ON GROSS OPERATING REVENUE

To determine if port size, based on annual gross operating revenue, had any correlation with port self-sufficiency, the following annual gross operating revenue categories were arbitrarily established:

Greater than (>) $75 million
$40 million to $75 million
$20 million to $40 million
$10 million to $20 million
Less than (<) $10 million

Gross operating revenue is defined as total revenue from marine operations such as long term lease rentals, other facility and equipment rents, wharfage, dockage, freight handling, license fees, and other user charges. Operating revenue does not include non-marine revenue, interest income, gain from sale of or retirement of assets, tax receipts, contributions, donations, and grants. No effort has been made to change the top or bottom limit of each category. As a result, ports could annually move from one revenue category to another as tariff rates were raised (or lowered), long term contracts expired, volume of cargo showed large fluctuation, and various operations were added or discontinued.

Since this study is based on the analysis of the increase or decrease in the number of profitable self-sufficient ports each year, the movement of ports from one category to another may convolute the trend analysis for the category involved. This situation is present in this analysis of gross operating revenue categories.

Summary:

During the ten-year study period (1985-1994), an increase in profitable ports was found in only the two highest gross operating revenue categories of ports: (1) with gross operating income between $40 million and $75 million and (2) in excess of $75 million.

Average operating ratios for all revenue categories show an increase over the study period with average operating margins showing a corresponding decrease. Such movement and direction indicate a deteriorating position. Ports with an average gross operating revenue of less than $10 million (approximately 50% of

all the ports responding to the finance survey during the study period) have had a negative average operating margin (indicating operating losses) since 1990.

The average net return on net investment in plant, property, and equipment (before taxes) on all of the revenue categories shows a steady decline during the study period. Ports in the revenue category of under $10 million had an average negative return (before taxes) for the last five years of the study period.

Average tax receipts and other contributions were sufficient to eliminate the average negative net return for the under $10 million category in each of the five years.

Annual Gross Operating Revenue in Excess of $75 Million:

Table 3.1 and Figure 3.1 show the number of ports in the category. During the years 1985 and 1986 only one port was in this revenue category. In 1987 a second port entered in this group, and a third port qualified for the years 1988 and 1989. Since 1990 the same four ports each have annual gross operating revenue in excess of $75 million.

Figure 3.2 is a trend analysis for the ten-year period (1985-1994), and Figure 3.3 is a trend analysis for the seven-year period (1988-1994). The limited number of ports, and the addition of three ports during the ten year period, produce a convoluted trend of the number of both profitable and unprofitable ports.

The first two ports to enter this category have profitable operations. With the exception of the year 1991, the last two ports are not profitable. There is no reason to expect that there will be any change in the number of profitable and unprofitable ports in this revenue category until additional ports qualify for inclusion.

Table 3.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GROSS OPERATING REVENUES IN EXCESS OF $75 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	0	1	1
1986	0	1	1
1987	0	2	2
1988	1	2	3
1989	1	2	3
1990	2	2	4
1991	1	3	4
1992	2	2	4
1993	2	2	4
1994	2	2	4

Figure 3.1

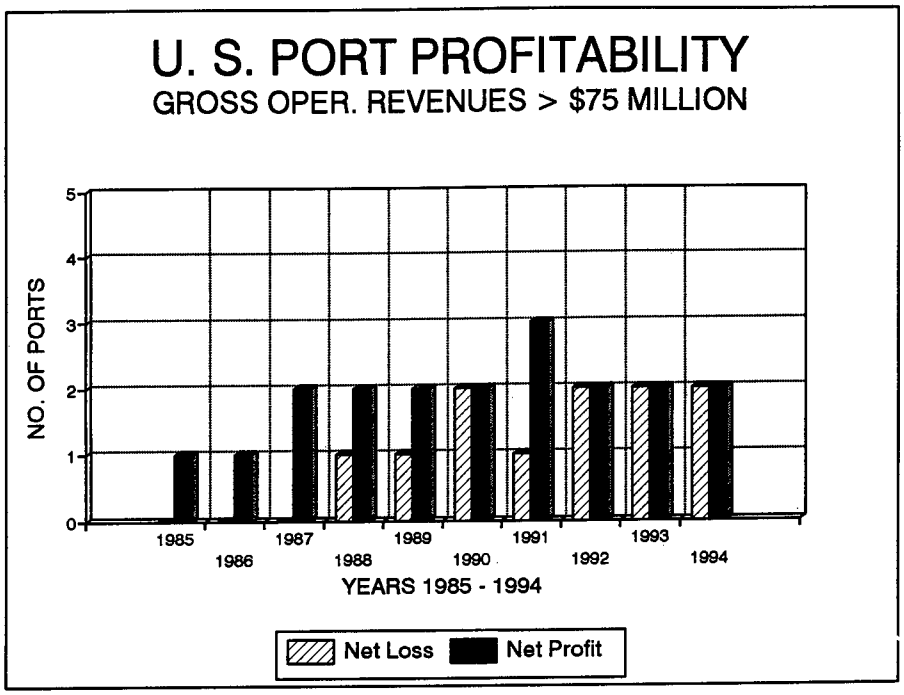


Figure 3.2

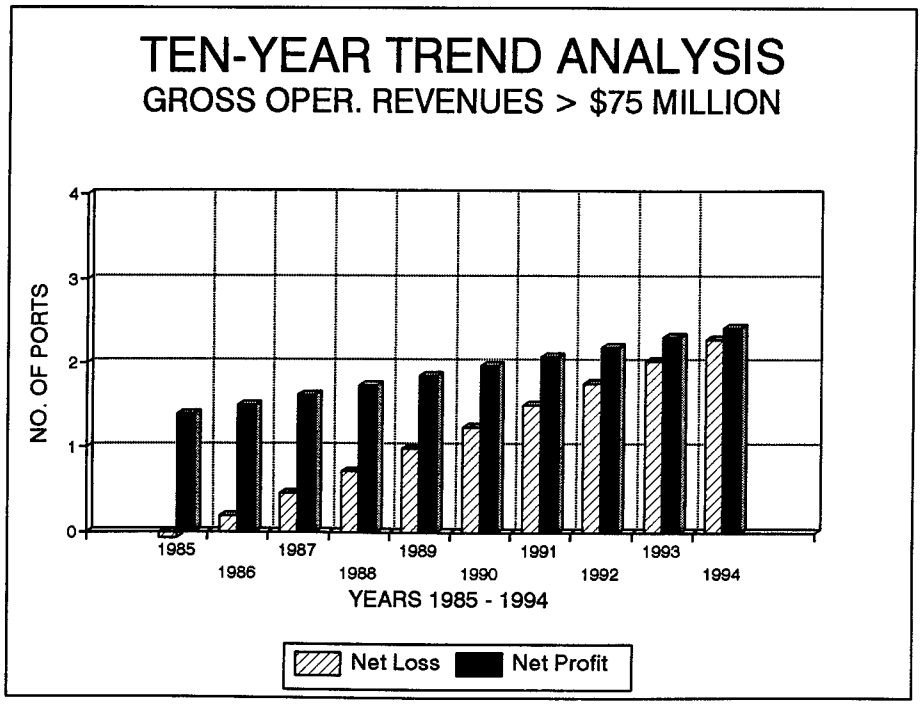
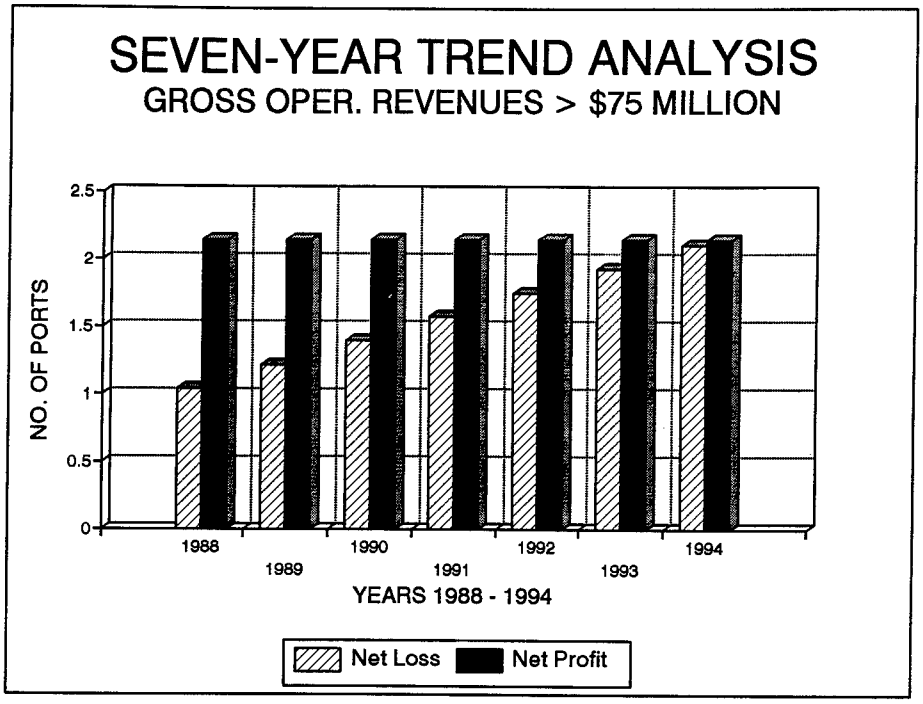


Figure 3.3



Annual Gross Operating Revenue Between $40 Million and $75 Million:

The total number of U.S. ports in the category grew from six in 1985 to 12 in 1994. The number ranged between six and seven until the number of ports in this category began to rise in 1992. These numbers are illustrated in Table 3.2 and Figure 3.4.

In 1985 and 1986 five ports were profitable, but that number fell for the three-year period, 1987-1989. Since 1990 the number of self-sufficient ports has exceeded the number of ports that are not self-sufficient.

Two of the original ports in this category have moved to a higher category as their annual gross operating revenues exceeded $75 million. The remaining four ports (one of which did not participate in the 1994 AAPA Port Finance Survey) have been joined by nine new ports in this category.

Figures 3.5 and 3.6 plot trend analysis for the ten-year period (1985-1994) and the seven-year period (1988-1994), respectively. The ten-year trend analysis (Figure 3.5) shows an increase in the number of both profitable and unprofitable ports. The trend line for the number of unprofitable ports is relatively flat for the seven year period beginning 1988 (Figure 3.6), but this is to be expected since there were four unprofitable ports in this category in 1988 versus one in 1985.

Annual Gross Operating Revenue Between $20 Million and $40 Million:

Table 3.3 shows the number of profitable and non-profitable ports for each of the years during the ten-year period (1985-1994). Figure 3.7 is a bar chart illustrating this data.

During this period the number of profitable ports in this category exceeded the non-profitable ports in seven years including five of the last six years studied.

In the year 1994 only four ports (three profitable) in this category responded to the port finance survey. The fluctuation in the number of ports in this category affects the trend analyses shown in Figure 3.8 (ten-year trend) and Figure 3.9 (seven-year period). The trend analysis shown in Figure 3.9 for the seven-year period (1988-1994) has the best fit.

Table 3.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GROSS OPERATING REVENUES BETWEEN $40 MILLION AND $75 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	1	5	6
1986	2	5	7
1987	3	3	6
1988	4	2	6
1989	4	3	7
1990	2	4	6
1991	1	5	6
1992	1	8	9
1993	4	6	10
1994	5	7	12

Figure 3.4

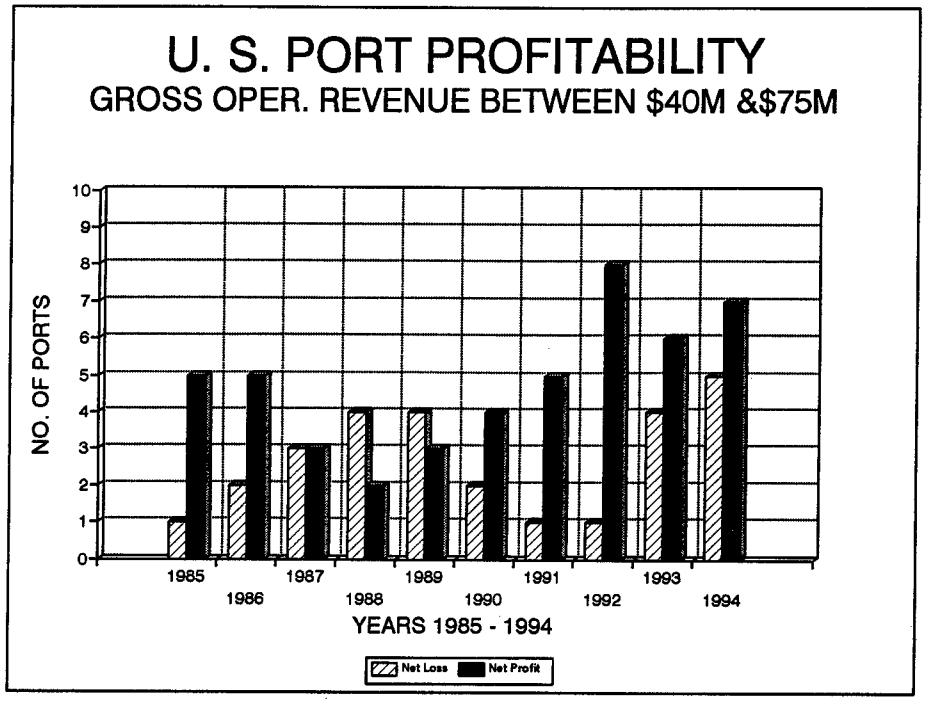


Figure 3.5

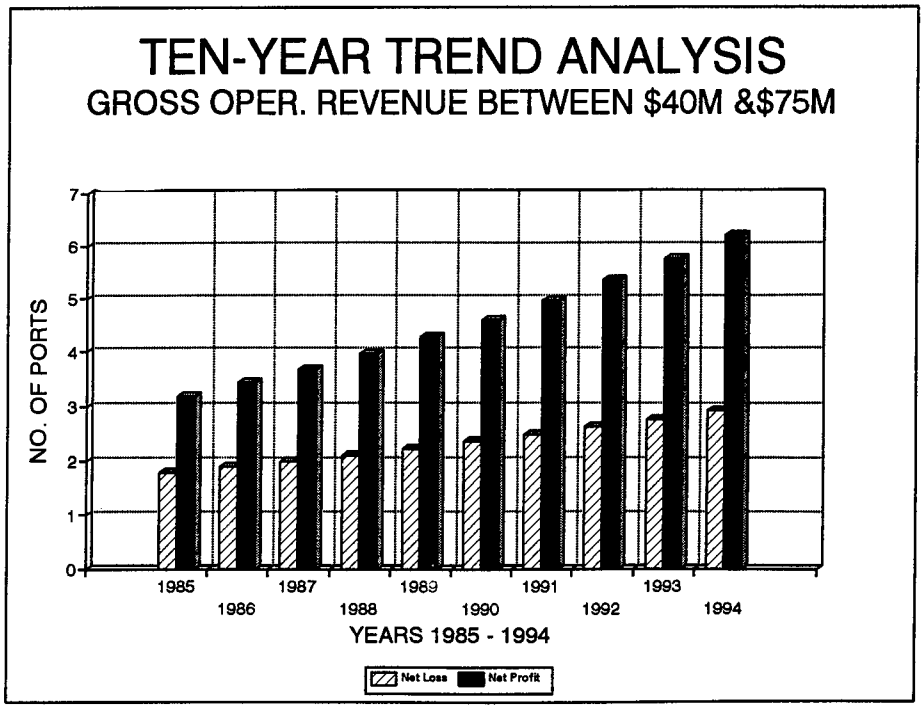


Figure 3.6

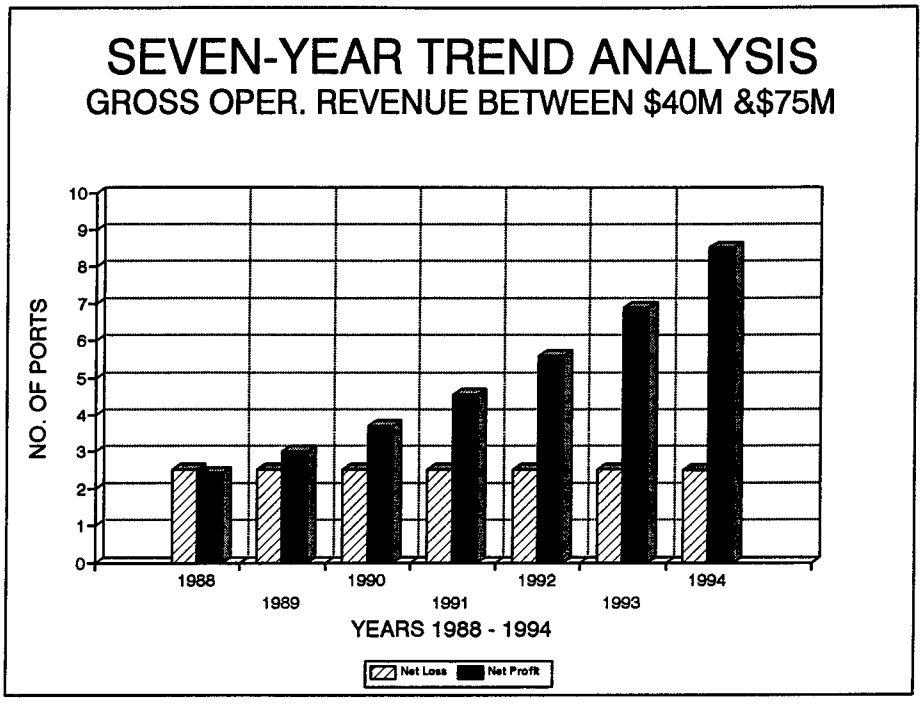


Table 3.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GROSS OPERATING REVENUE BETWEEN $20 MILLION AND $40 MILLION
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	5	7
1986	3	2	5
1987	3	4	7
1988	5	4	9
1989	4	6	10
1990	3	5	8
1991	0	8	8
1992	2	6	8
1993	3	2	5
1994	1	3	4

Figure 3.7

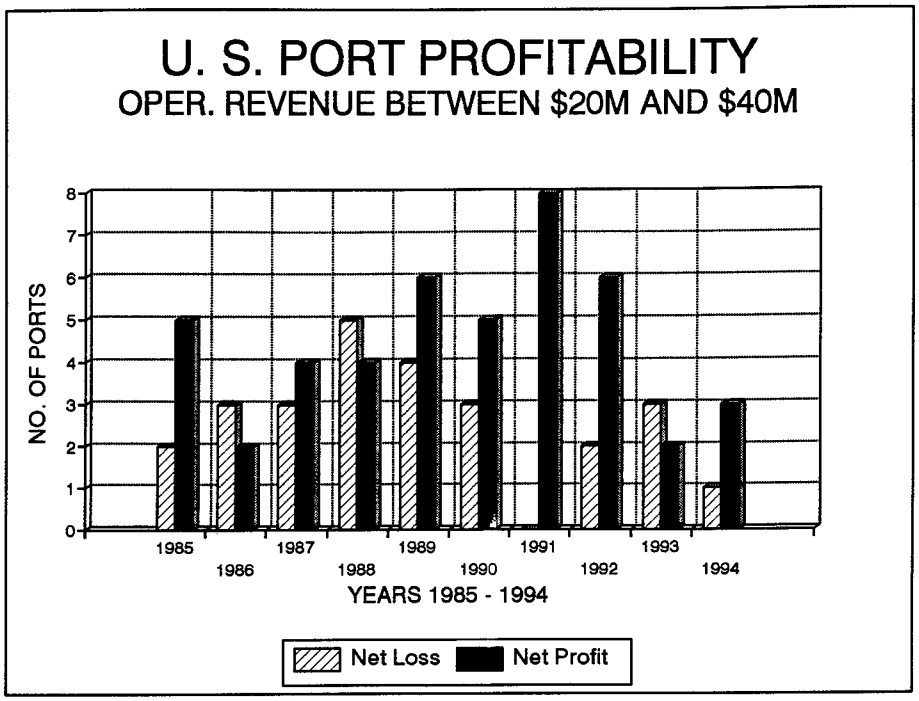


Figure 3.8

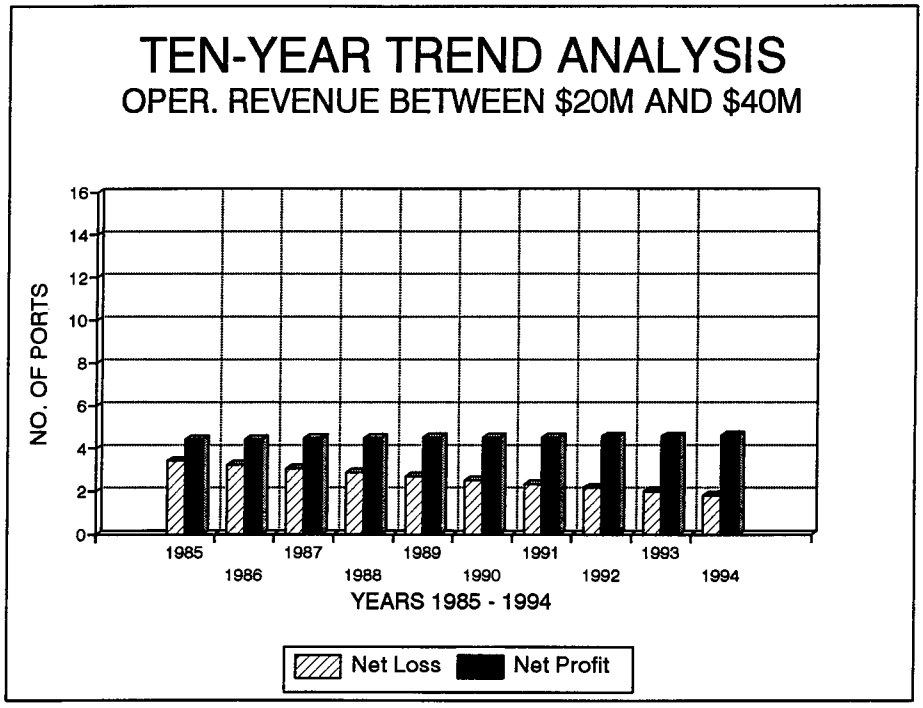
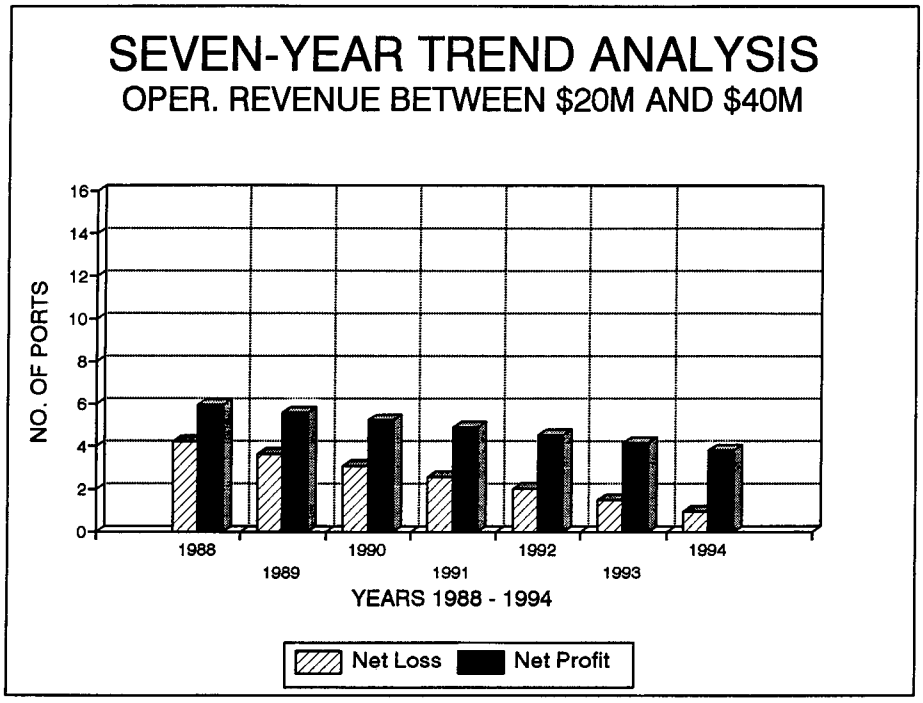


Figure 3.9



Annual Gross Operating Revenue Between $10 Million and $20 Million:

The most interesting thing about this category is that the number of profitable ports exceeded those not profitable in every year but one (1992) during the ten-year period (1985-1994). This is clearly indicated in Figure 3.10 which is a bar chart graphing the data in Table 3.4. The total number of ports in this category ranged from a low of five in 1987 to a high of 11 in 1988. However, in seven years of the ten-year period there were a total of seven or eight reporting ports.

The ten-year and seven-year trend analyses shown in Figures 3.11 and 3.12, respectively, project a decrease in profitable ports and an increase in unprofitable ports.

Annual Gross Operating Revenue Less than $10 Million:

During the ten-year period studied, this category contained from 49% (1994) to 56% (1989) of all reporting U.S. ports, ranging from a low of 20 ports in 1987 to a high of 35 ports in 1989, as shown in Table 3.5. The bar chart in Figure 3.13 clearly illustrates that the number of profitable ports exceeded those which were not profitable in six of the ten years, including the first five years of the ten-year period. The trend analysis for the ten-year period (1985-1994) (Figure 3.14) indicates a descending curve for profitable ports and an ascending curve for non-profitable ports. Figure 3.15, the trend analysis for the seven-year period (1988-1994) provides the same indications.

Table 3.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GROSS OPERATING REVENUE BETWEEN $10 MILLION AND $20 MILLION
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	5	7
1986	1	5	6
1987	1	4	5
1988	1	10	11
1989	3	4	7
1990	1	7	8
1991	3	4	7
1992	7	1	8
1993	3	4	7
1994	2	6	8

Figure 3.10

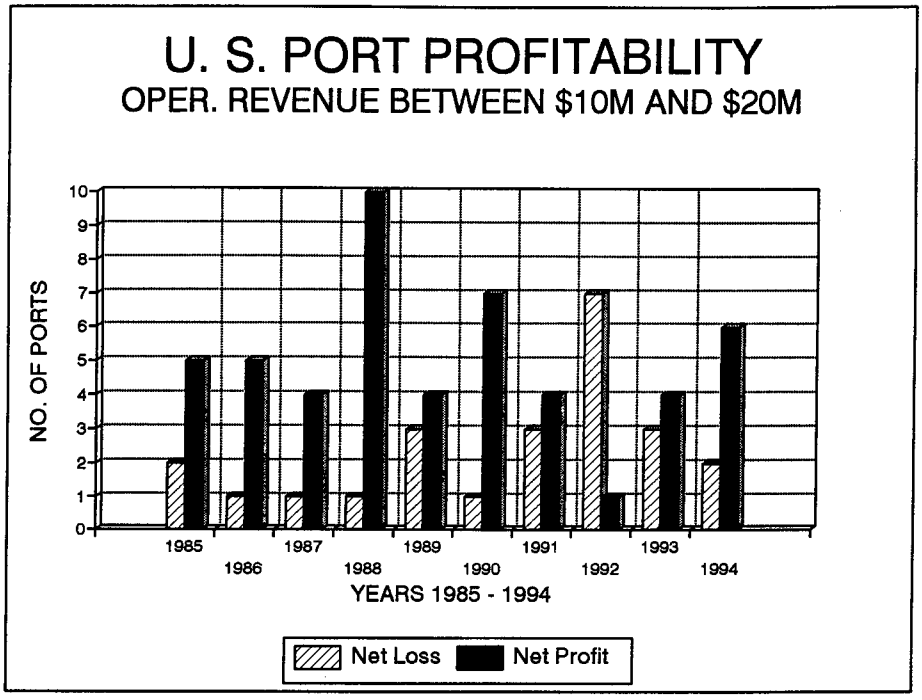


Figure 3.11

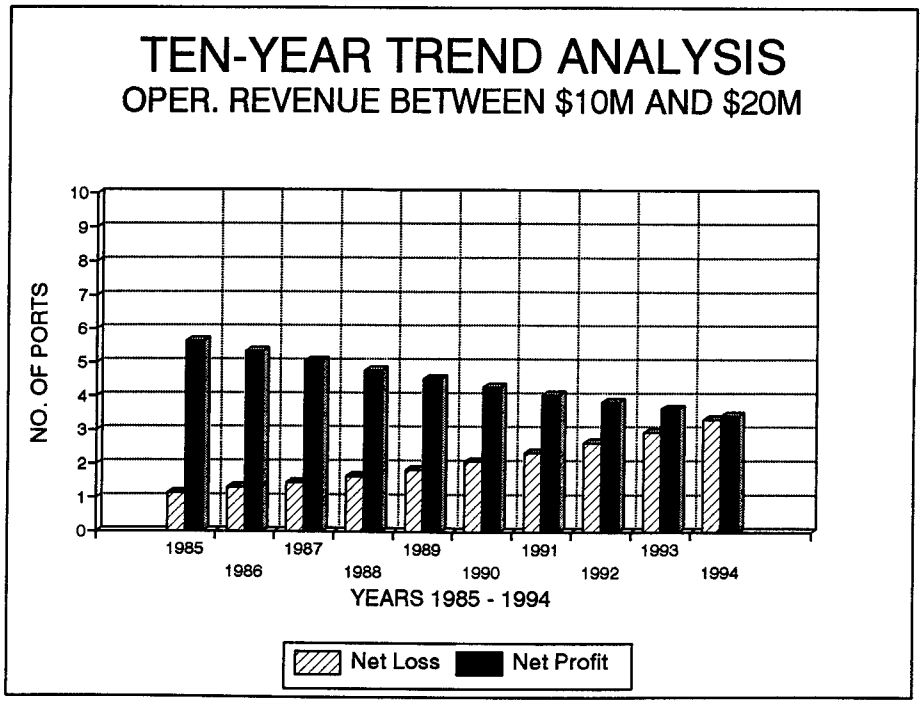


Figure 3.12

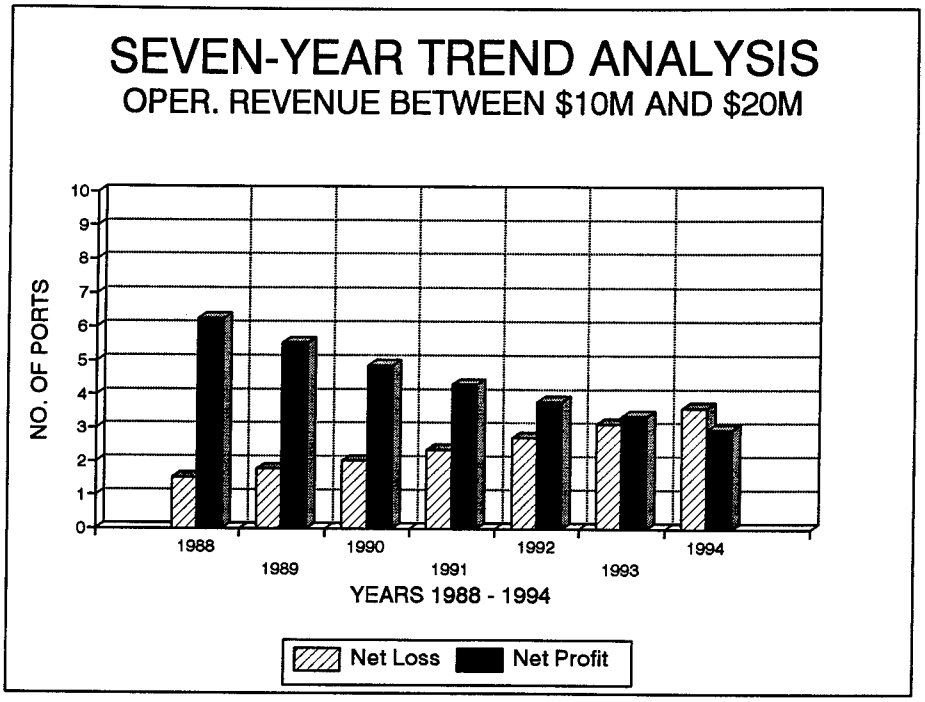


Table 3.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
GROSS OPERATING REVENUE UNDER $10 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	9	15	24
1986	8	13	21
1987	6	14	20
1988	11	20	31
1989	15	20	35
1990	16	14	30
1991	14	13	27
1992	10	19	29
1993	19	12	31
1994	15	12	27

Figure 3.13

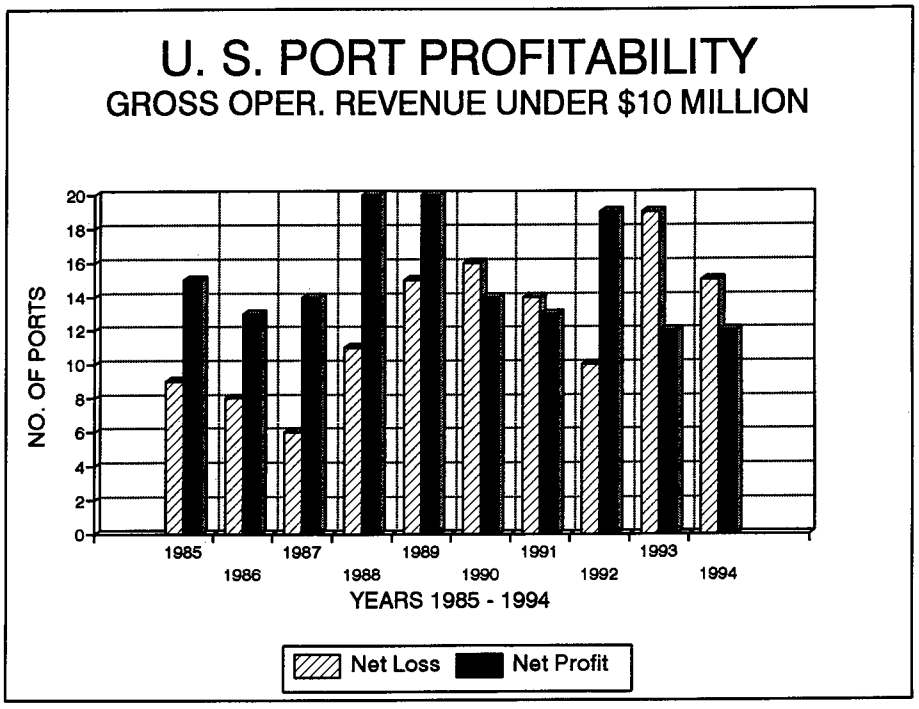


Figure 3.14

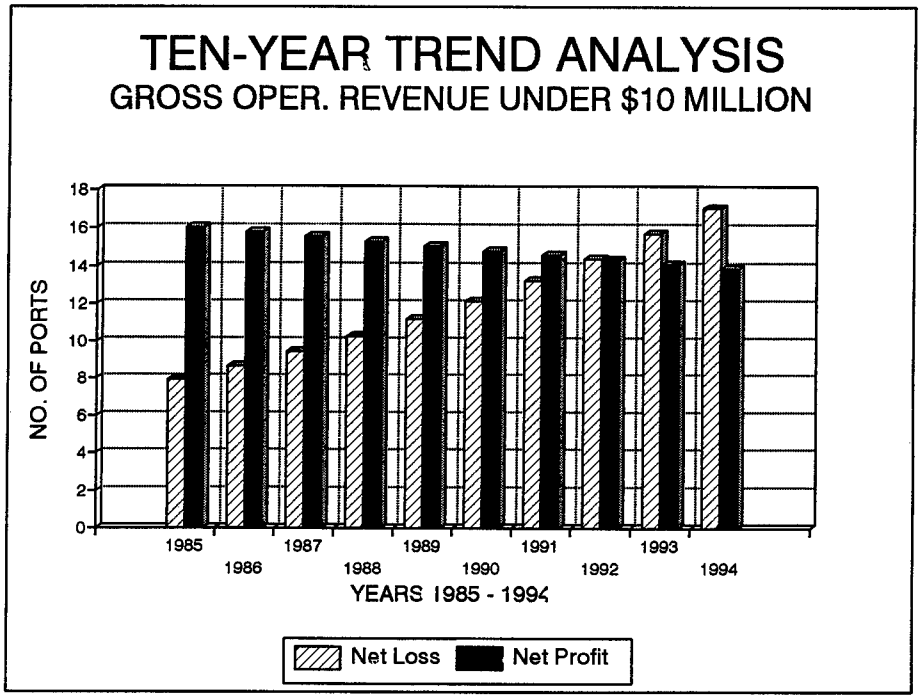
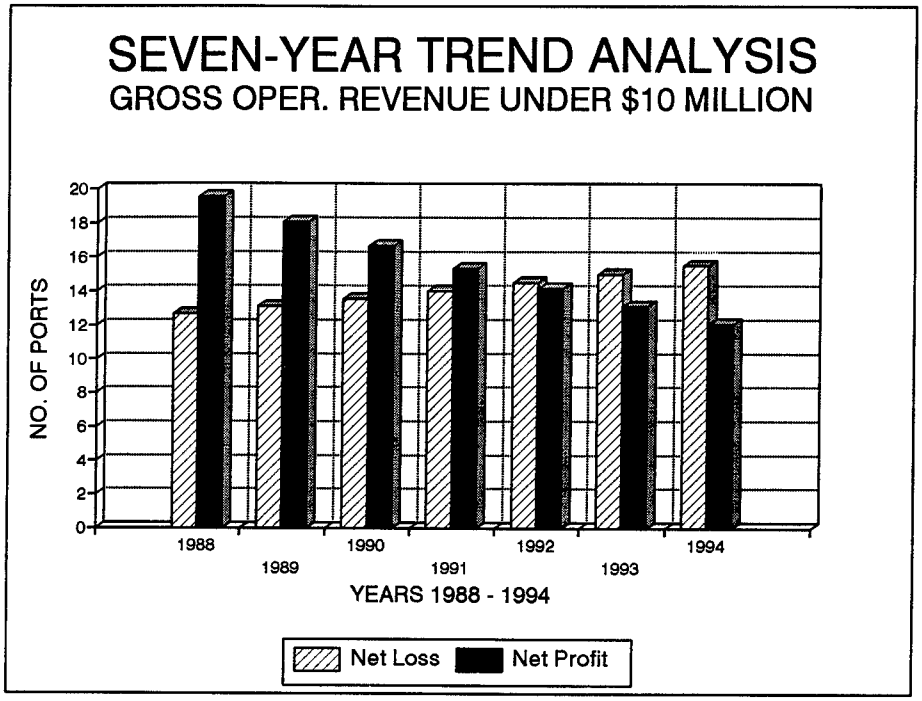


Figure 3.15



Operating Ratios and Operating Margins:

Tables 3.6 and 3.7 show the average operating ratios and operating margins for each revenue category for each of five select years during the ten-year period.

Although average operating ratios continue to increase and operating margins decrease irrespective of port size, the average operating ratios and operating margins of ports with annual gross revenues in excess of $40 million are still in a satisfactory range (namely, their operating ratios are less than the all-port average of 84%, while their operating margins are higher than the all-port average of 16%). There has been a serious deterioration (i.e., increase) in the average operating ratio of ports with average annual gross operating revenues of less than $40 million. The average operating ratio for the 50% of U.S. ports with annual gross operating revenue less than $10 million has steadily increased from 82% in 1985 to over 100% for the years 1990, 1992, and 1994, resulting in an average net operating loss for those years.

Net Return on Net Investment in Plant, Property, and Equipment:

Tables 3.8 and 3.9 show the average net return (before and after the collection of tax receipts and contributions respectively) on net investment in plant, property, and equipment. The average net return before taxes on net investment for all ports had a steady decline from 3.4% in 1985 to 1.3% for 1994. Each of the revenue categories also shows a steady decline from 1985, with the average net return of the ports with annual gross operating revenues of $10 million to $20 million experiencing a large negative return in 1992 and the ports with annual gross operating revenues less than $10 million having negative returns in 1990, 1992, and 1994.

Table 3.9, average net return (after taxes and contribution on net investment) shows positive average returns in all revenue categories except for ports in the $10 million to $20 million category in 1992. Receipts of taxes and contributions for ports in the less than $10 million range were sufficient to cover the average net loss before taxes. On the other hand, although they clearly helped, tax receipts and contributions were insufficient to cover average operating losses for ports in the $10-$20 million category in 1992.

Table 3.6
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING RATIO - BY GROSS OPERATING REVENUE
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	77%	84%	82%	81%	84%
>$75 Million	54%	67%	73%	73%	73%
$40 - $75 MIllion	78%	94%	87%	78%	83%
$20 - $40 Million	83%	90%	89%	90%	91%
$10 - $20 Million	82%	85%	75%	92%	87%
< $10 Million	82%	89%	102%	107%	137%

Table 3.7
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING MARGIN - BY GROSS OPERATING REVENUE
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	23%	16%	18%	19%	16%
> $75 Million	46%	33%	27%	27%	27%
$40 - $75 MIllion	22%	6%	13%	22%	17%
$20 - $40 Million	17%	10%	11%	10%	9%
$10 - $20 Million	18%	5%	25%	8%	13%
< $10 Million	18%	11%	-2%	-7%	-37%

Table 3.8
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY GROSS OPERATING REVENUE

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	3.4%	2.6%	2.7%	2.0%	1.3%
> $75 Million	12.6%	9.2%	5.3%	5.5%	3.5%
$40 - $75 MIllion	2.2%	-0.3%	0.9%	1.9%	0.8%
$20 - $40 Million	1.6%	1.2%	2.4%	0.6%	1.2%
$10 - $20 Million	5.0%	2.2%	3.3%	-8.3%	0.4%
< $10 Million	5.1%	4.4%	-0.1%	-2.5%	-3.8%

Table 3.9
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY GROSS OPERATING REVENUE

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	4.2%	3.4%	3.8%	3.2%	2.1%
> $75 Million	12.7%	9.2%	6.0%	6.0%	3.7%
$40 - $75 MIllion	3.2%	1.7%	3.2%	3.6%	1.3%
$20 - $40 Million	1.7%	1.2%	2.4%	0.6%	1.4%
$10 - $20 Million	5.7%	3.9%	4.0%	-3.4%	2.2%
< $10 Million	6.7%	5.5%	1.4%	1.3%	0.0%

Tax Receipts and Other Contributions, Donations, and Grants:

It is appropriate at this point to review some information reported in the annual AAPA finance surveys on taxes and contributions received by ports. It has been pointed out in the Introduction that the off balance sheet payments of principal and interest on debt by state and local government bodies owning port facilities and certain contributions, donations, and grants not accounted for as other income are not reported in the annual surveys.

The average annual reported taxes and contributions for each of the reporting U.S. ports is shown below for the five separate years as illustrated in Table 3.10:

Year	Amount
1985	$ 955,000
1988	1,137,000
1990	1,620,000
1992	1,641,000
1994	1,301,000*

* One major limited-operating port with gross revenues in excess of $40 million included in the first four annual periods above did not respond to the survey in 1994. Had that port reported an amount equal to the amount reported in 1992, the average per port may have been in the $1.6 million range.

Table 3.10 charts the average taxes and contributions reported by revenue category for each of five years of the ten-year period (1985-1994). The largest average annual tax and contribution support is for ports in the $40 million to $75 million category. The 1994 average for this category is much smaller than previous years, partially because of the one port in this category that did not participate in the 1994 port finance survey. Had that port been included with tax support at the level of the preceding period, the average annual support in this category may have exceeded $3 million.

There has been an increase in the average annual support for ports in the $10 million - $20 million and less than $10 million categories. Ports in the $20 million - $40 million revenue category appear to have had the least tax and contribution support in the five years analyzed.

Table 3.10

U. S. PORT PROFITABLITY

SELECTED YEARS BETWEEN 1985 - 1994

AVERAGE ANNUAL RECEIPTS OF TAXES, CONTRIBUTIONS, DONATIONS & GRANTS

BY PORT - BY GROSS OPERATING REVENUE

($000)

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	$955	$1,137	$1,620	$1,641	$1,301
> $75 Million	$562	$0	$4,601	$2,986	$1,431
$40 - $75 Million	$3,865	$6,687	$8,764	$5,009	$1,692
$20 - $40 Million	$164	$56	($42)	$0	$367
$10 - $20 Million	$483	$1,408	$576	$986	$1,302
< $10 Million	$613	$392	$542	$1,047	$1,247

CHAPTER 4

PORT PROFITABILITY BY PORT SIZE BASED ON NET INVESTMENT IN PLANT, PROPERTY, AND EQUIPMENT

Another method for measuring port size is the net investment in plant, property, and equipment which was defined in Chapter 1 to include "the cost of land, buildings, equipment, and other improvements, minus their accumulated depreciation."

To determine if port size using this measure correlates with port self-sufficiency the following categories of net investment in plant, property, and equipment were established:

Greater than (>) $250 million
$100 million to $250 million
$50 million to $100 million
$25 million to $50 million
$12.5 million to $25 million
Less than (<) $12.5 million

This study is based on an analysis of the increase or decrease in the number of profitable ports each year. The reader is again cautioned that AAPA finance survey participation is voluntary and that the failure of some ports to consistently participate each year might affect trend analysis, as will the movement of ports from one category to another.

Summary:

During the ten-year study period an increase in profitable ports was found in only the largest net investment category of ports with net investment in plant, property, and equipment in excess of $250 million.

Operating ratios for all investment categories showed an increase over the study period with the exception of ports with a net investment in plant, property, and equipment in excess of $500 million.

In 1994 all of the categories with a net investment of less than $250 million showed an average negative net return (before taxes) on net investment in plant, property, and equipment. Tax receipts and other contributions were sufficient to eliminate the negative net returns for all investment categories except for the "$100 million to $250 million" category.

Net Investment in Plant, Property, and Equipment in Excess of $250 million:

The total number of ports in this category range from a low of ten in the first three years of the ten-year period (1985-1994) to a high of 14 in 1994. Table 4.1 and Figure 4.1 show that in eight of the ten years the number of profitable ports exceeded the number of those that were not.

Figure 4.2 and 4.3 contain the trend analyses of the ten-year period (1985-1994) and the seven-year period (1988-1994). Both analyses show an increasing trend in the number of profitable ports. The trend analysis for the seven-year period, Figure 4.3, indicates a decreasing trend in the number of unprofitable ports; but the ten-year trend analysis, Figure 4.2, shows a slight upward trend in the number of ports not considered profitable. Since the ending year in the ten-year trend indicates four unprofitable ports, and the average number of unprofitable ports for the last five years of the ten-year period is 3.9, (five in each of three years), the ten-year trend analysis appears to be a better fit.

Net Investment in Plant, Property, and Equipment Between $100 Million and $250 Million:

Table 4.2 and Figure 4.4 show the number of reporting profitable and non-profitable ports in this category. The total number of ports ranged from a low of six in 1985 to a high of 12 ports in 1989. There were a total of nine ports in this category in 1993 and 1994, the last two years of the ten-year period (1985-1994). A review of Figure 4.4 indicates that in nine years of the ten-year period the number of profitable ports exceeded the number that were not, including the first eight years of the period and 1994.

Figures 4.5 and 4.6 contain the trend analyses for the ten-year period (1985-1994) and the seven-year period (1988-1994). Both show a downward trend in the number of profitable ports, but there appears to be no upward trend in the number of unprofitable ports for the seven-year period.

Table 4.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT > $250 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	8	10
1986	3	7	10
1987	4	6	10
1988	5	4	9
1989	6	5	11
1990	5	6	11
1991	1	11	12
1992	3	10	13
1993	5	7	12
1994	5	9	14

Figure 4.1

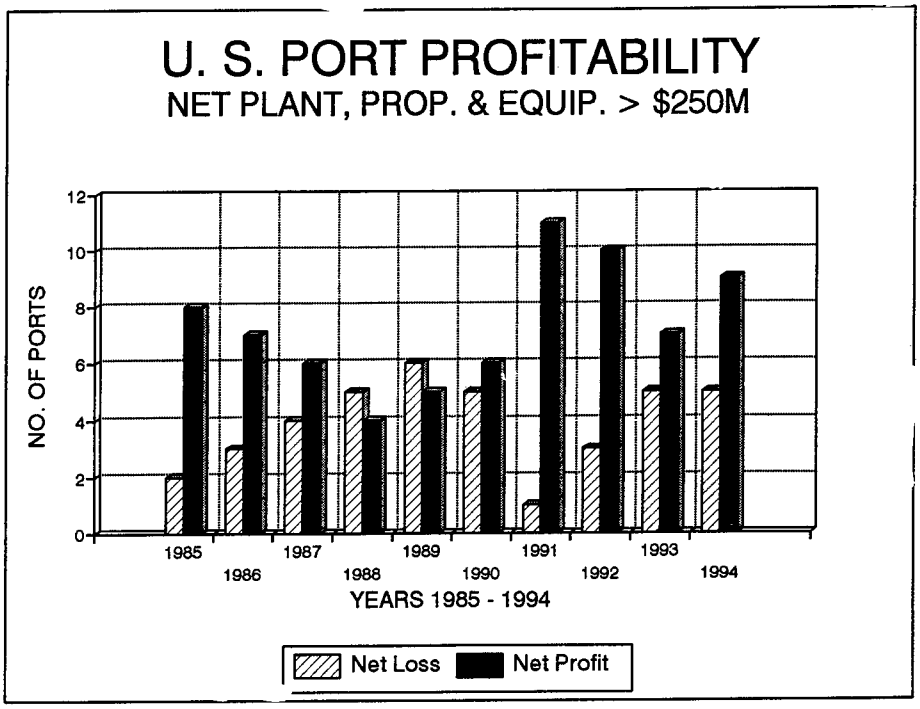


Figure 4.2

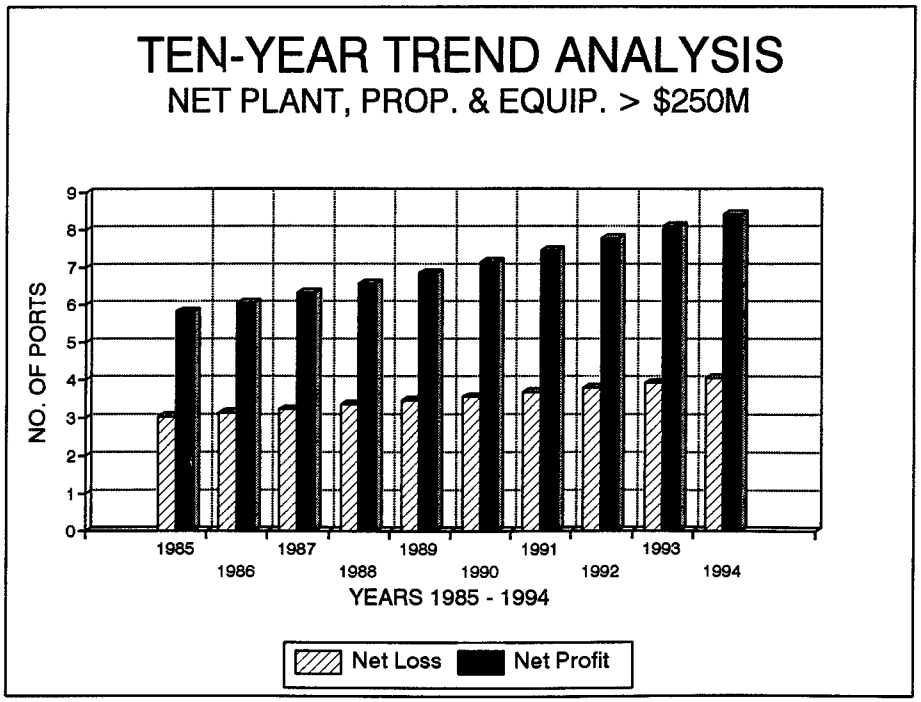


Figure 4.3

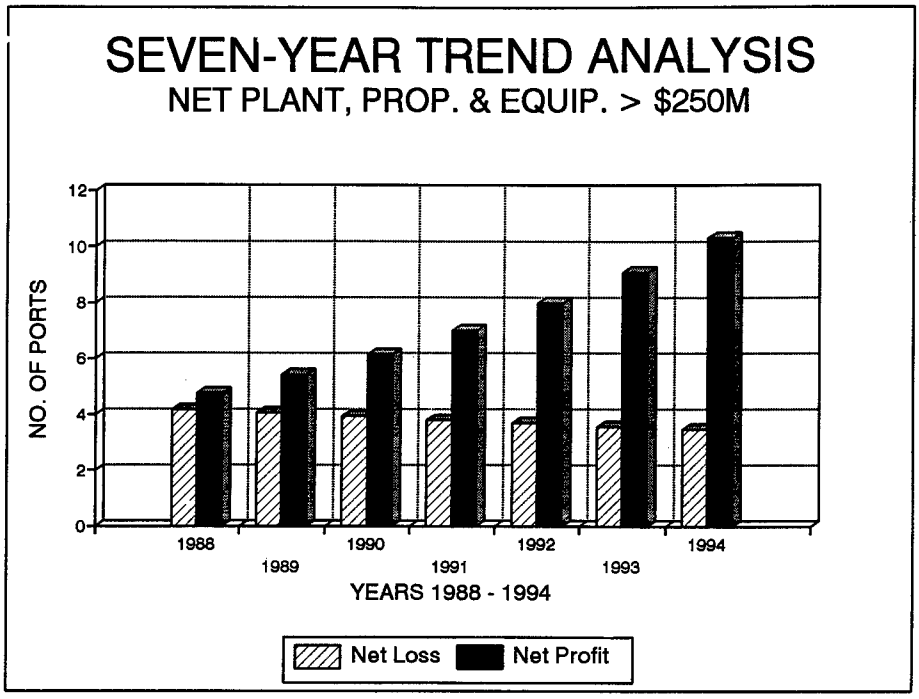


Table 4.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT
BETWEEN $100 MILLION AND $250 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	1	5	6
1986	3	6	9
1987	3	7	10
1988	4	7	11
1989	5	7	12
1990	3	8	11
1991	2	5	7
1992	3	4	7
1993	5	4	9
1994	4	5	9

Figure 4.4

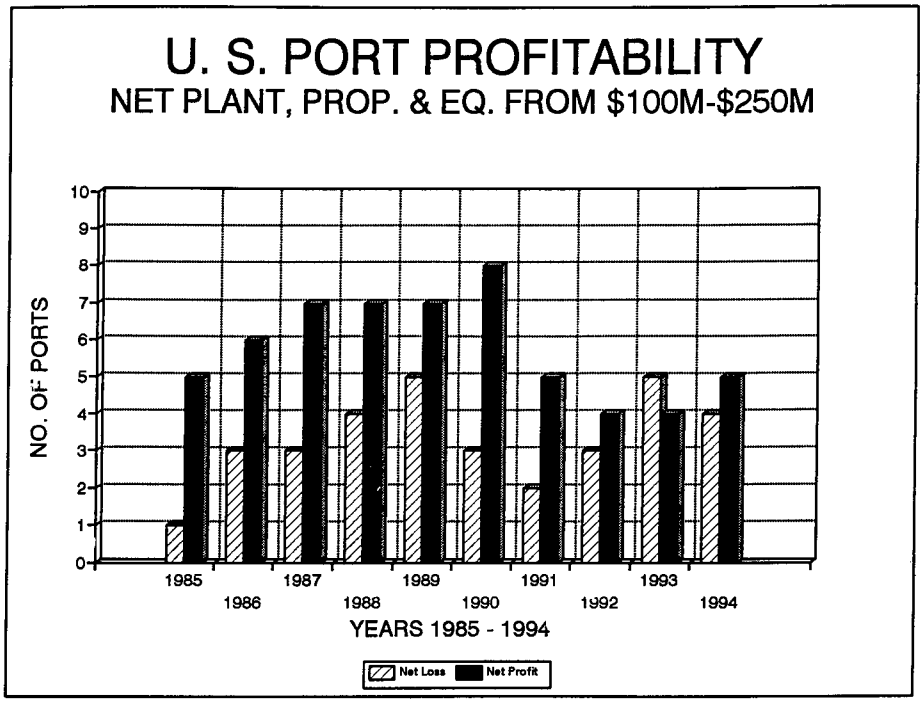


Figure 4.5

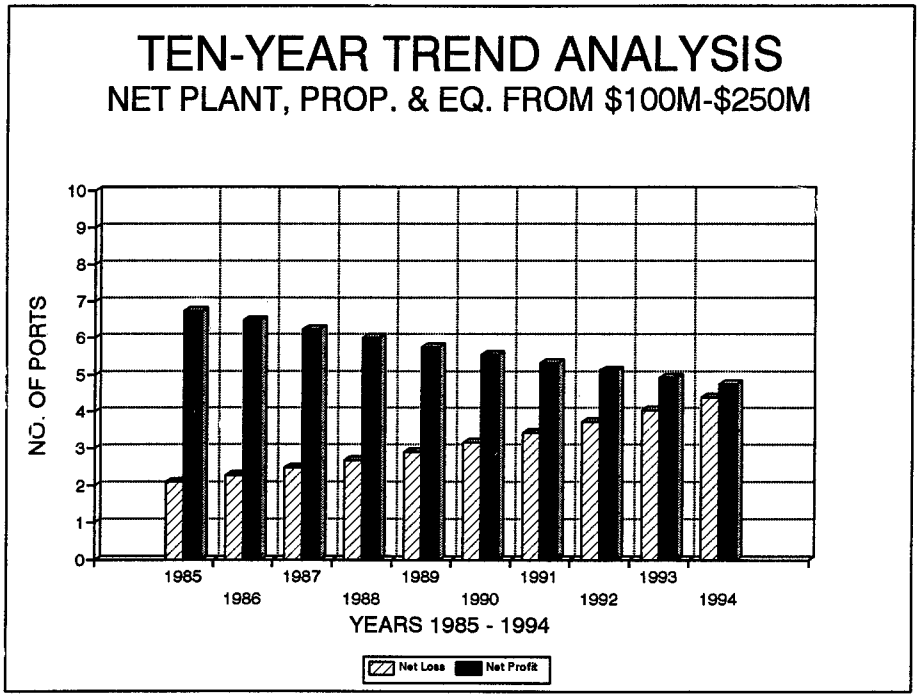
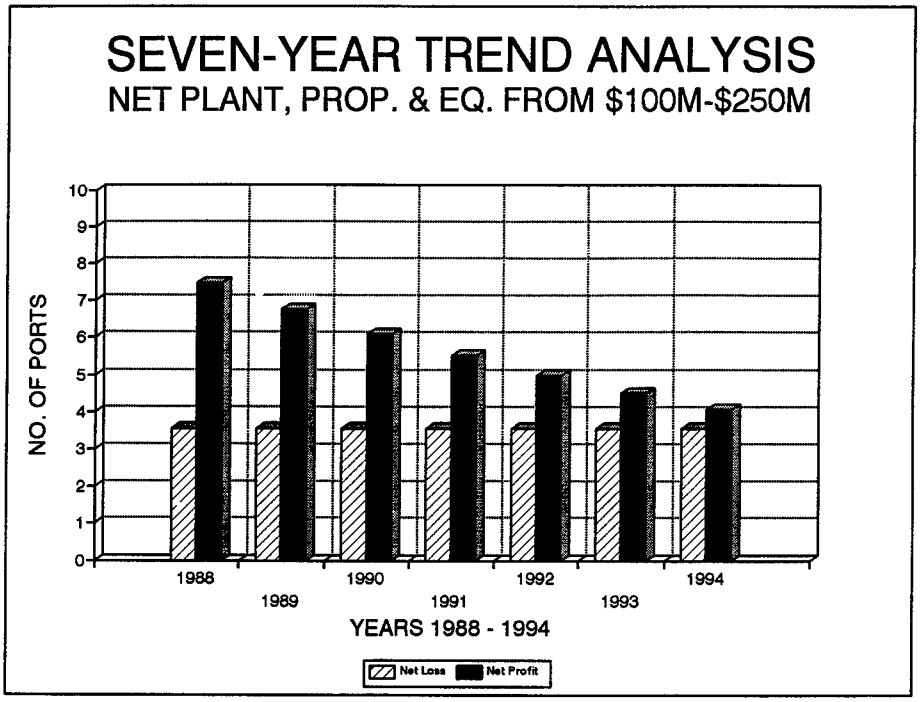


Figure 4.6



Net Investment in Plant, Property, and Equipment Between $50 Million and $100 Million:

Table 4.3 and Figure 4.7 illustrate the number of profitable and non-profitable ports in this category in each year of the ten-year period (1985-1994). The total number of ports ranged from a low of five in 1986 and 1987 to a high of 12 in three years, the last of which was 1992. The number of profitable ports exceeded the number of non-profitable ports in six of the ten years, and the number of non-profitable ports exceeded the number of profitable ports in only two years.

The trend analysis for the ten-year period, Figure 4.8, shows a rather flat downward curve for the number of profitable ports and an increase in the number of non-profitable ports.

Figure 4.9, the analysis for the seven-year period (1988-1994), indicates a downward trend in the number of profitable ports and an upward trend in the number of ports not profitable.

Net Investment in Plant, Property, and Equipment Between $25 Million and $50 Million:

The total number of ports in this category ranged from a low of five in 1986 and 1987 to a high of 13 in 1989. The number of profitable ports exceeded those not profitable in only four years of the ten-year period of the study according to Table 4.4 and Figure 4.10, and the number of non-profitable ports exceeded the number of profitable ones in four years also.

Figures 4.11 and 4.12 show trend analyses for this category for the ten-year period (1985-1994) and the seven-year period (1988-1994) respectively. Both analyses indicate a decrease in the number of profitable ports, but they suggest different trends in the number of ports not profitable. The seven-year decreasing trend is probably the most reasonable since it does not include the years 1985-1987, the first three years of the study period.

Table 4.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT
BETWEEN $50 MILLION AND $100 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	2	6	8
1986	2	3	5
1987	2	3	5
1988	2	10	12
1989	4	4	8
1990	4	6	10
1991	7	5	12
1992	6	6	12
1993	4	5	9
1994	4	3	7

Figure 4.7

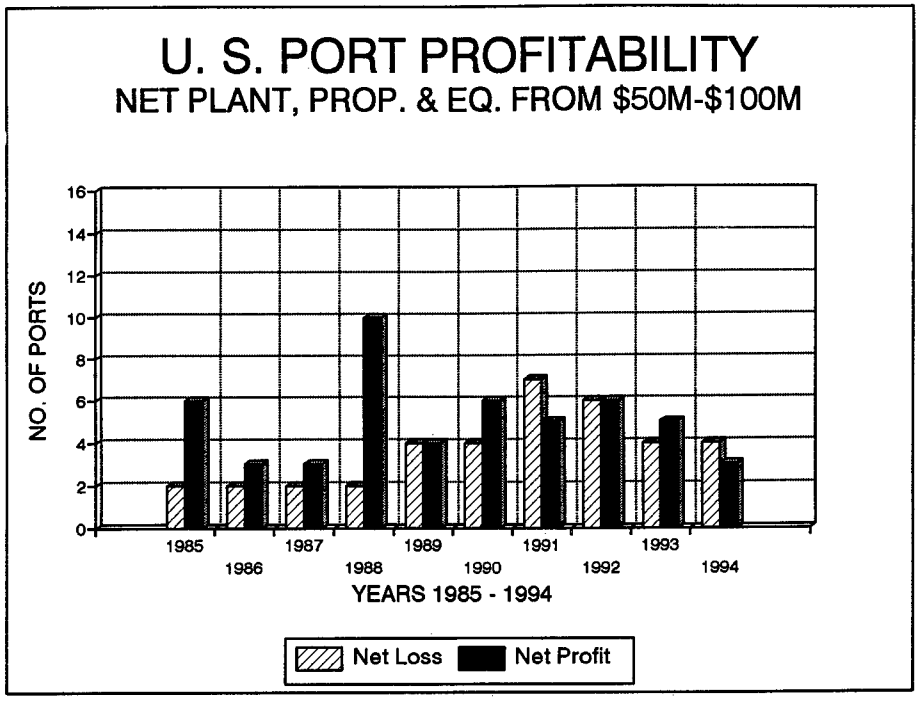


Figure 4.8

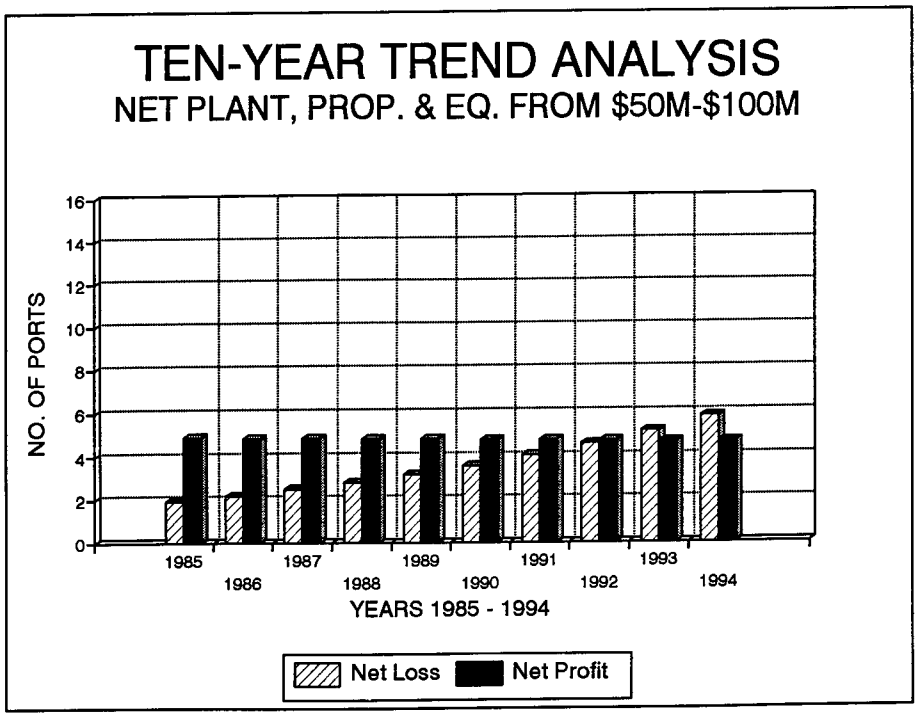


Figure 4.9

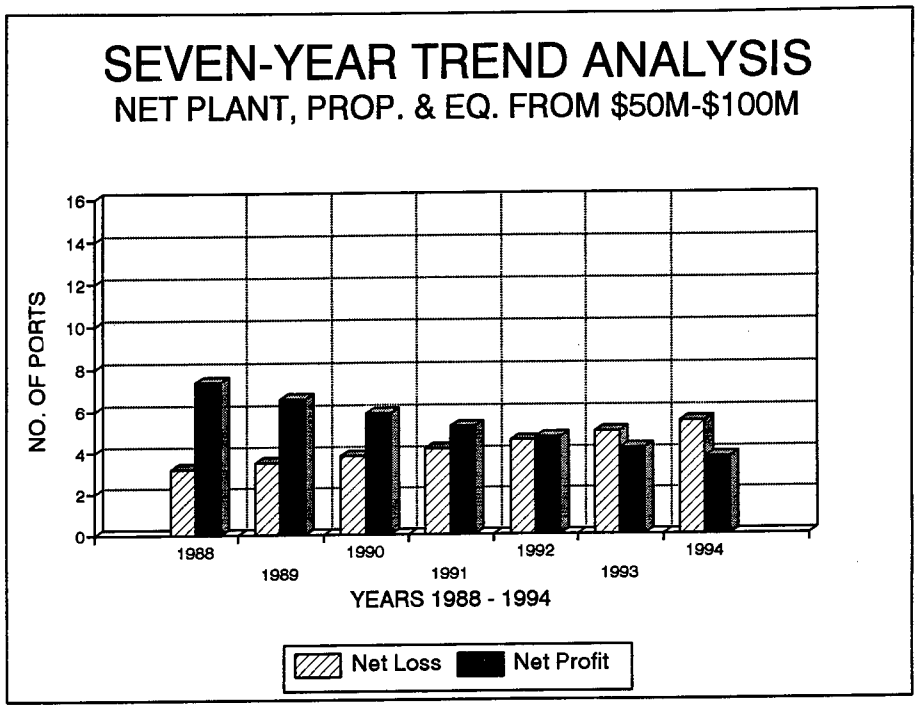


Table 4.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT
BETWEEN $25 MILLION AND $50 MILLION
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	4	4	8
1986	1	4	5
1987	1	4	5
1988	5	6	11
1989	7	6	13
1990	6	4	10
1991	4	4	8
1992	6	3	9
1993	6	3	9
1994	3	5	8

Figure 4.10

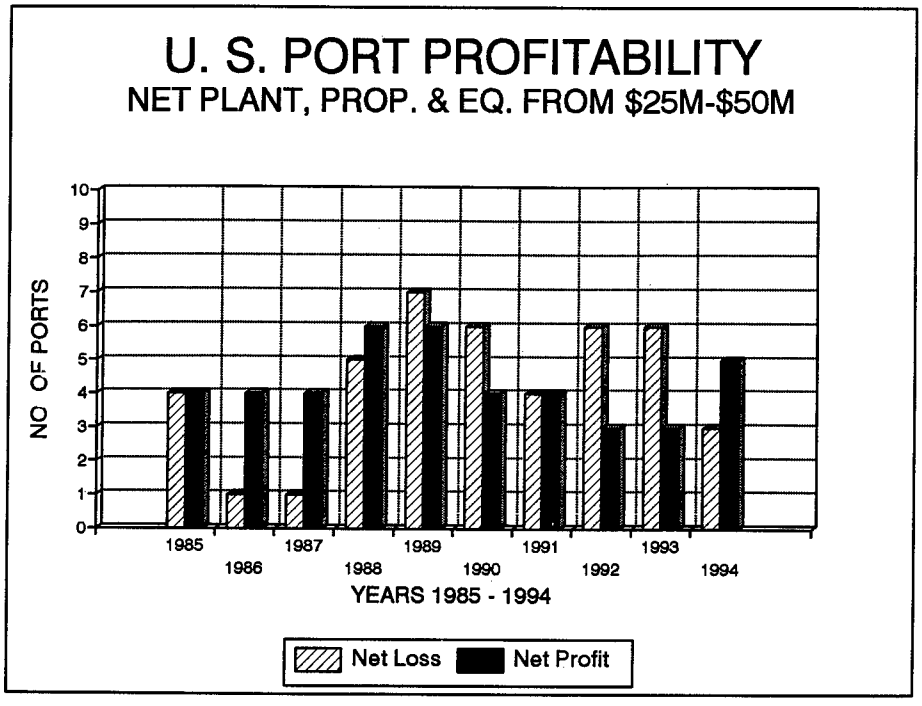


Figure 4.11

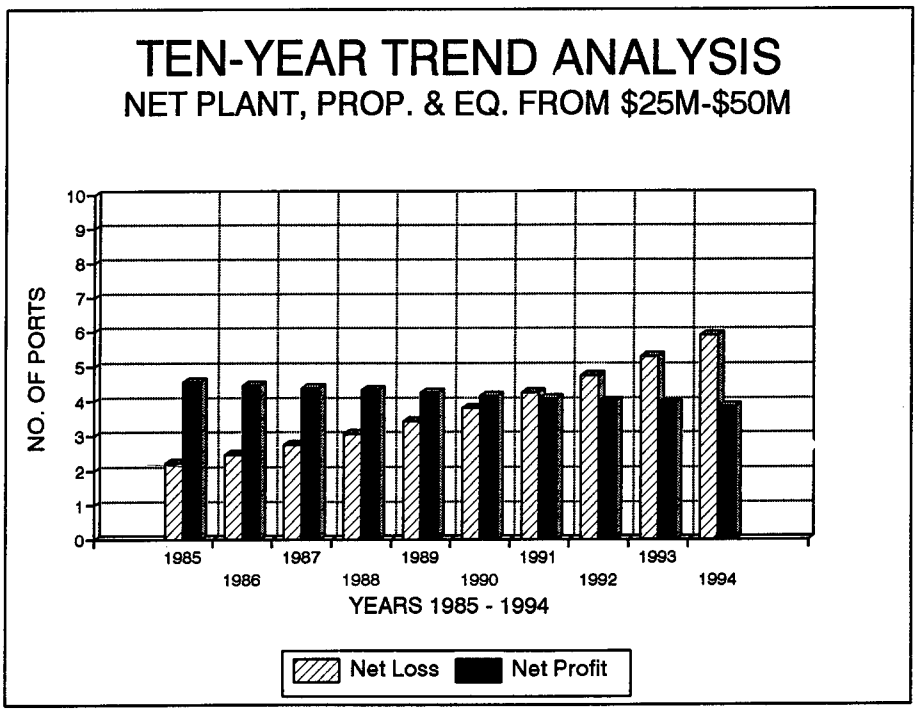
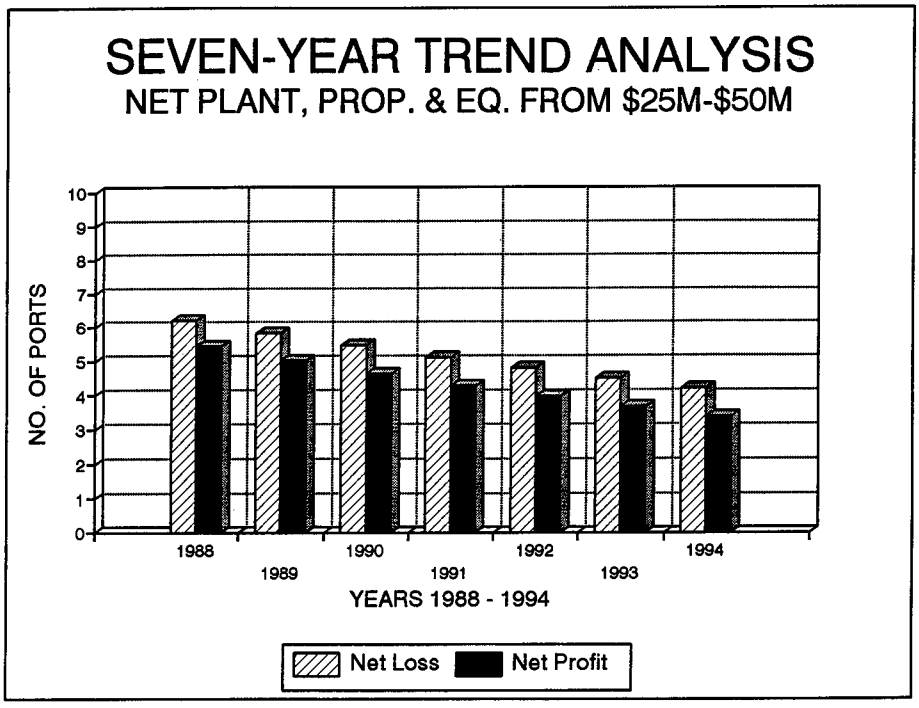


Figure 4.12



Net Investment in Plant, Property, and Equipment Between $12.5 Million and $25 Million.

Table 4.5 and Figure 4.13 illustrate the number of profitable and non-profitable ports in this investment range each year of the ten-year study period. The total number of ports in this group ranged from a low of six in each of four different years to a high of 11 in 1988.

The number of profitable ports exceeded the number not profitable in only two years. On the other hand, the number of non-profitable ports exceeded the number of profitable ones in six years.

It is not surprising that the ten-year trend analysis in Figure 4.14 and the seven-year trend analysis in Figure 4.15 indicate a decline in the number of profitable ports and an increase in the number of ports which are not self-sufficient.

Net Investment in Plant, Property, and Equipment Less Than $12.5 Million:

Table 4.6 shows the total number of ports in this category ranged from a low of three ports in 1987 to a high of nine ports in 1994. Figure 4.16 indicates that the number of profitable ports exceeded the number not profitable in seven years of the ten-year study period. In only one year, 1993, did the number of non-profitable ports exceed those that were self-sufficient.

The trend analysis for the ten-year period (1985-1994) shown in Figure 4.17 indicates a slight decreasing trend in the number of profitable ports and an increasing trend of ports not profitable. Figure 4.18 contains the trend analysis for the seven-year period (1988-1994) and shows increasing trends in the number of both profitable and non-profitable ports with a net investment in port facilities of less than $12.5 million.

Table 4.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT
BETWEEN $12.5 MILLION AND $25 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	4	2	6
1986	3	3	6
1987	3	3	6
1988	3	8	11
1989	3	7	10
1990	4	3	7
1991	5	4	9
1992	9	0	9
1993	4	2	6
1994	6	4	10

Figure 4.13

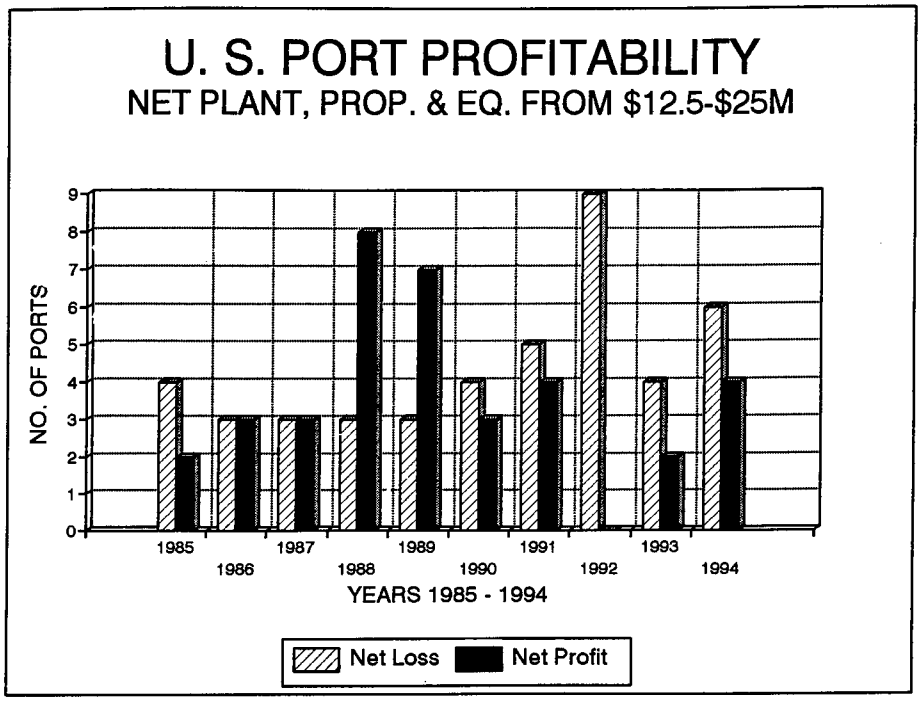


Figure 4.14

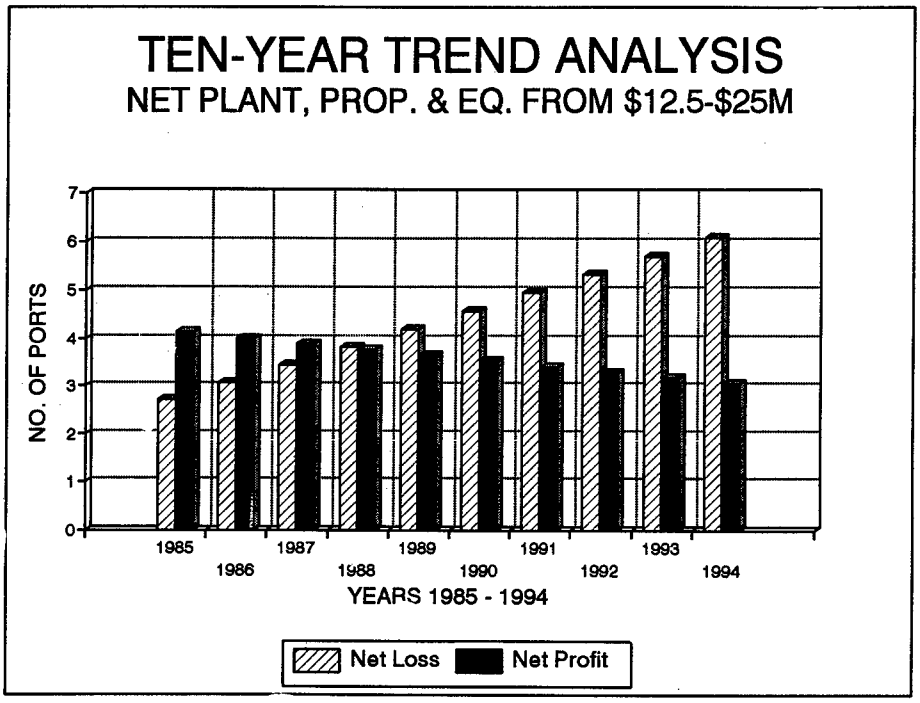


Figure 4.15

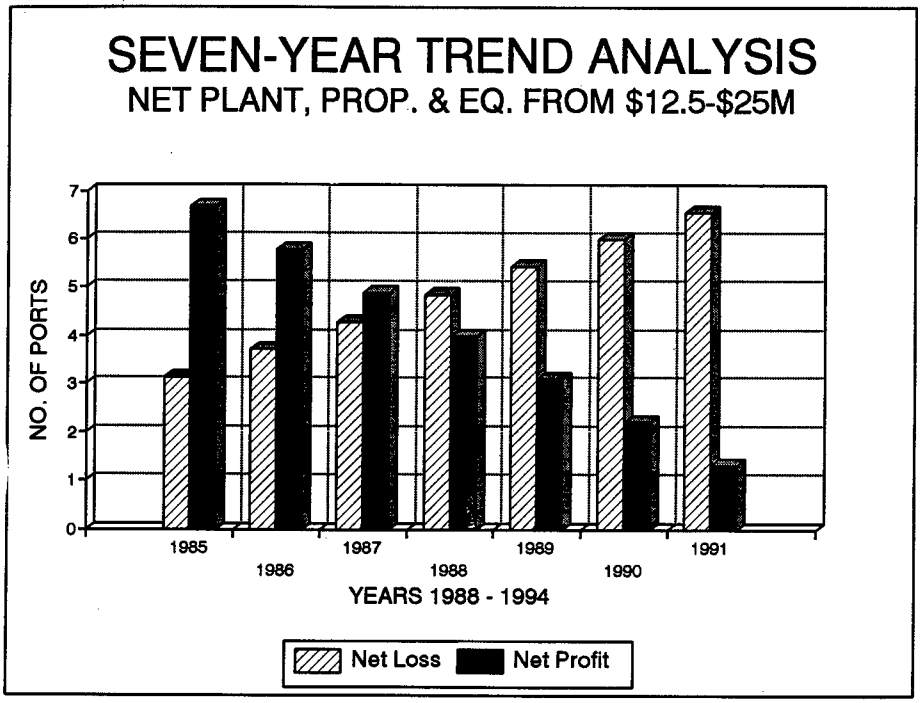


Table 4.6
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NET PLANT, PROPERTY AND EQUIPMENT < $12.5 MILLION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	1	6	7
1986	2	2	4
1987	0	3	3
1988	2	3	5
1989	1	3	4
1990	1	3	4
1991	0	4	4
1992	3	4	7
1993	5	4	9
1994	3	3	6

Figure 4.16

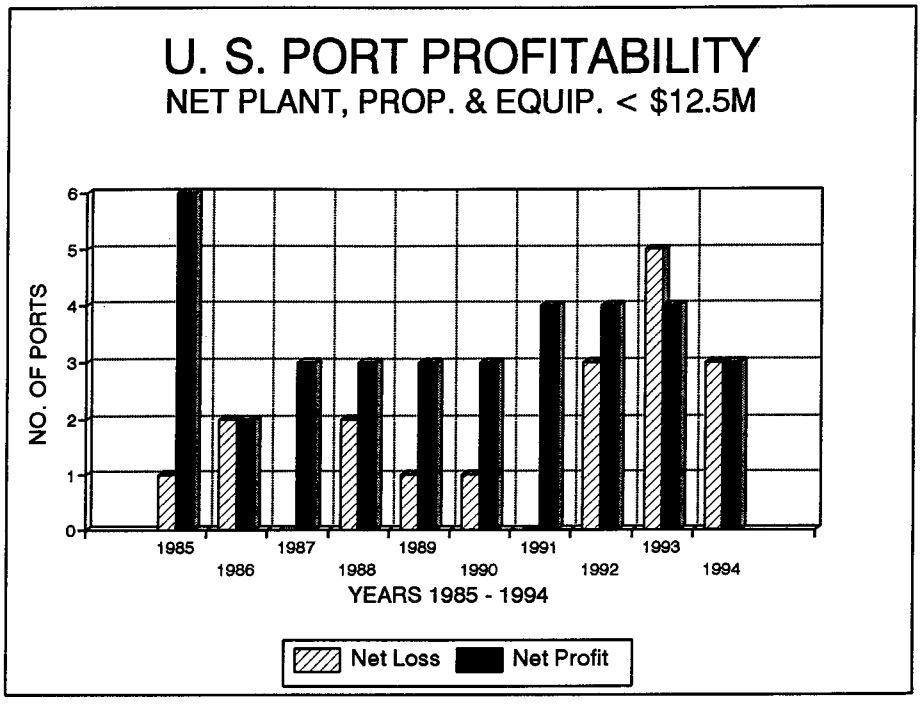


Figure 4.17

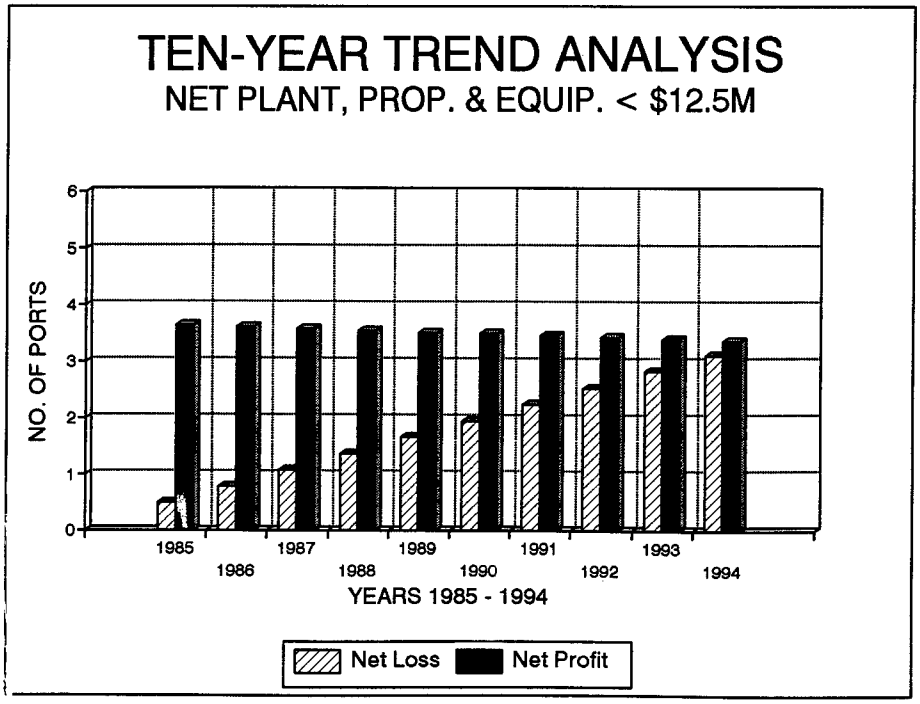
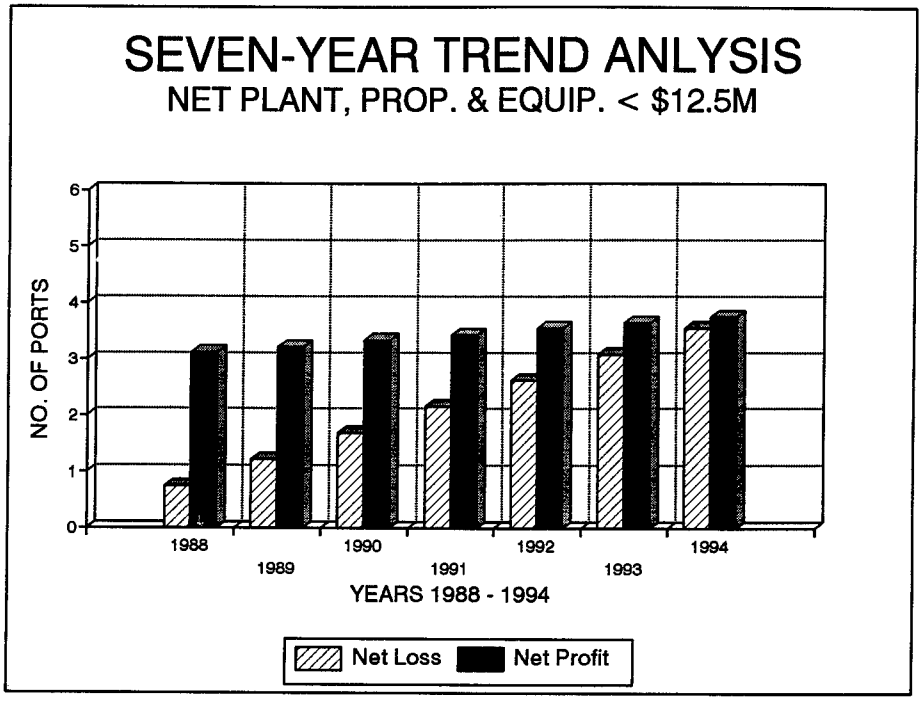


Figure 4.18



Operating Ratios and Operating Margins:

Table 4.7 shows the operating ratio for each net investment category for the same selected five years of the ten-year period. Table 4.8 contains the operating margins for the same years in the same format.

Although the number of ports in the "greater than $500 million" category has increased from two in 1985 to four in 1994, two ports that had been in this category did not reply to the 1994 finance survey. The operating ratio for this category has remained stable at a ratio below 70%.

The other categories have all had an increase in the average operating margin. The 1994 average operating ratio of 87% and operating margin of 13% for the "$250 million to $500 million" category were at levels to sustain an average net profit before taxes.

The average operating ratios for all of the other categories were so high, and the average operating margins so low, that there was an average net loss before taxes in all of the other categories for the year 1994.

The large variation in pattern for some categories, particularly the "under $12.5 million" category, is caused by the variation in the ports that respond to the finance survey each year.

Net Return on Net Investment in Plant, Property, and Equipment:

Tables 4.9 and 4.10 show the average net return (before and after the collection of tax receipts and contributions, respectively) on net investment in plant, property, and equipment. In Chapter 2 it was pointed out that the average net return before taxes on net investment for all ports had a steady decline from 4.4% in 1985 to 1.3% for 1994. Table 4.9 shows that each of the net investment categories have the same relative level of decline from 1985, with the average net return of the ports in all of the net investment categories below the "$250 million to $500 million" level experiencing negative return in 1994.

Table 4.10, average net return (after taxes and contribution on net investment) shows positive average returns in all net investment categories except the "$100 million to $250 million" category.

Table 4.7
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING RATIO
BY NET INVESTMENT IN PLANT PROPERTY, AND EQUIPMENT
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	77%	84%	82%	81%	84%
>$500 Million	65%	68%	66%	66%	65%
$250 - $500 MIllion	77%	93%	95%	83%	87%
$100 - $250 Million	85%	90%	87%	92%	102%
$50 - $100 Million	82%	83%	87%	93%	106%
$25 - $50 Million	83%	89%	107%	90%	93%
$12.5 - $25 Million	93%	118%	99%	123%	107%
< $12.5 Million	70%	104%	46%	102%	97%

Table 4.8
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING MARGIN
BY NET INVESTMENT IN PLANT PROPERTY, AND EQUIPMENT
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	23%	16%	18%	19%	16%
>$500 Million	35%	32%	34%	34%	35%
$250 - $500 MIllion	23%	7%	5%	17%	13%
$100 - $250 Million	15%	10%	13%	8%	-2%
$50 - $100 Million	18%	17%	13%	7%	-6%
$25 - $50 Million	17%	11%	-7%	10%	7%
$12.5 - $25 Million	7%	-18%	-1%	-23%	-7%
< $12.5 Million	21%	-4%	54%	2%	3%

Table 4.9
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY NET INVESTMENT IN PLANT PROPERTY, AND EQUIPMENT
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	3.4%	2.6%	2.7%	2.0%	1.3%
>$500 Million	4.4%	4.1%	5.0%	4.8%	3.8%
$250 - $500 Million	2.5%	-0.1%	0.2%	1.1%	0.5%
$100 - $250 Million	5.4%	3.5%	2.5%	0.8%	-1.9%
$50 - $100 Million	3.5%	2.1%	1.4%	-0.4%	-0.5%
$25 - $50 Million	1.0%	1.1%	-1.5%	-0.7%	-0.2%
$12.5 - $25 Million	1.0%	-0.9%	0.5%	-5.4%	-2.3%
< $12.5 Million	11.0%	9.0%	7.5%	4.3%	-1.4%

Table 4.10
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY NET INVESTMENT IN PLANT PROPERTY, AND EQUIPMENT
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	4.2%	3.4%	3.8%	3.2%	2.1%
>$500 Million	4.4%	5.0%	6.1%	4.8%	3.5%
$250 - $500 Million	3.5%	0.0%	1.9%	3.3%	1.7%
$100 - $250 Million	5.5%	4.8%	2.6%	1.3%	-1.2%
$50 - $100 Million	4.5%	3.0%	3.1%	1.9%	2.8%
$25 - $50 Million	2.9%	2.1%	0.1%	1.3%	3.2%
$12.5 - $25 Million	3.1%	0.8%	3.9%	0.1%	1.2%
< $12.5 Million	21.8%	15.0%	10.2%	5.3%	5.1%

Tax Receipts and Other Contributions, Donations, and Grants:

Table 4.11 charts the average taxes and contributions reported by investment category for each of five years of the ten-year period (1985-1994). The largest average annual tax and contribution support is for ports in the "$250 million to $500 million" net investment category.

The 1994 average for this category is much smaller than previous years, partially because of the one port in this category that did not participate in the 1994 port finance survey. Had that port been included with tax support at the level of the preceding period, the average annual support in this category may have exceeded $5 million.

There has been a relatively steady increase in the average annual support for ports since 1985 except for those in the "greater than $500 million" net investment category.

Table 4.11
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVERAGE ANNUAL RECEIPTS FROM TAXES, CONTRIBUTIONS, DONATIONS & GRANTS
BY PORT - BY NET INVESTMENT IN PLANT PROPERTY, AND EQUIPMENT
($000)

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	$955	$1,137	$1,620	$1,643	$1,301
>$500 Million	$0	$5,028	$7,729	$0	($2,589)
$250 - $500 Million	$3,103	$633	$5,767	$7,129	$3,760
$100 - $250 Million	$104	$2,231	$268	$827	$966
$50 - $100 Million	$745	$575	$594	$1,544	$2,245
$25 - $50 Million	$679	$408	$613	$653	$1,265
$12.5 - $25 Million	$333	$322	$532	$856	$666
< $12.5 Million	$595	$239	$102	$46	$447

CHAPTER 5

PORT PROFITABILITY BY TYPE OF OPERATION

Ports can be categorized by their type of operation: non-operating, operating, and limited-operating ports.

Non-operating ports are basically landlord ports, and all of the port facilities are generally leased or preferentially assigned with the lessee or assignee responsible for operating the facilities.

Operating ports in the U.S. generally provide all port services except stevedoring with their own employees including, but not limited to, loading and unloading of rail cars and trucks and the operation of container terminals, grain elevators, and other bulk terminal operations.

Limited-operating ports have facilities leased to others, but continue to operate one or more facilities with port employees. These operated facilities may be specialized terminals, such as grain elevators, bulk terminals, container terminals, etc.

Data on type of port operation were obtained in a survey for the 1994 Report and updated as necessary for this study. These data represent the current status of type of operation of the ports included in this study. The current status was used to analyze self-sufficiency for the entire ten-year period. Some changes in port operating type have occurred in the ten-year study period, but year-by-year data for each port each year are not available.

Trends were examined for the ten-year period (1985-1994) and the seven-year period (1988-1994).

Summary:

The number of profitable non-operating ports was consistently greater than the number of ports not profitable in each year of the ten-year study period. The non-operating category of ports was also the only group which did not show a declining trend in profitability for the ten-year period. The other two categories showed a declining trend in the number of profitable ports and an increasing trend in non-profitable ports.

Average operating ratios for all categories generally increased over the study period, with average operating margins showing a corresponding decrease. Despite this general observation, the

average operating ratio for operating ports was lower in 1994 than it was in 1985.

The average net return (before taxes) for all of the revenue categories declined steadily during the study period. Limited operating ports had an average negative net return (before taxes) in three of the five years analyzed, including 1994. Operating ports had an average net return before taxes of only 0.7% for 1994.

Average tax receipts and other contributions were sufficient to eliminate the average negative net return for the limited operating ports in the years such negative returns occurred.

Non-operating Ports:

In each of the years of the ten-year period (1985-1994) the number of self-sufficient non-operating ports exceeded the number of unprofitable ports as shown in Table 5.1 and graphed in Figure 5.1.

Figure 5.2 shows a very slight upward trend in the number of profitable non-operating ports and a more pronounced upward trend in the number of non-operating ports that were not profitable during the ten-year period (1985-1994).

On the other hand, the seven-year period (1988-1994) graphed in Figure 5.3 shows a downward trend in the number of profitable non-operating ports and a relatively stable trend in the number of non-operating ports which are not profitable, with the number of profitable ports consistently exceeding the number of unprofitable ones.

The early three-year period (1985-1987) has a profound effect on the slope of the trend lines in Figures 5.2 and 5.3. Non-operating ports with a net loss before taxes number five in 1985, nine in 1988 and nine in 1994. It is obvious that there will be a difference in the slope of a curve beginning at five and ending at nine compared to almost no slope in a curve with a starting point of nine and an ending point of nine.

Non-operating ports with a net profit before taxes numbered fourteen in 1985, seventeen in 1988 and fifteen in 1994, resulting in a very slight upward trend during the ten-year period (1985-1994) versus decreasing trend during the seven-year period (1988-1994).

Table 5.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
NON-OPERATING PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	5	14	19
1986	4	14	18
1987	4	15	19
1988	9	17	26
1989	7	21	28
1990	10	14	24
1991	7	15	22
1992	10	16	26
1993	6	16	22
1994	9	15	24

Figure 5.1

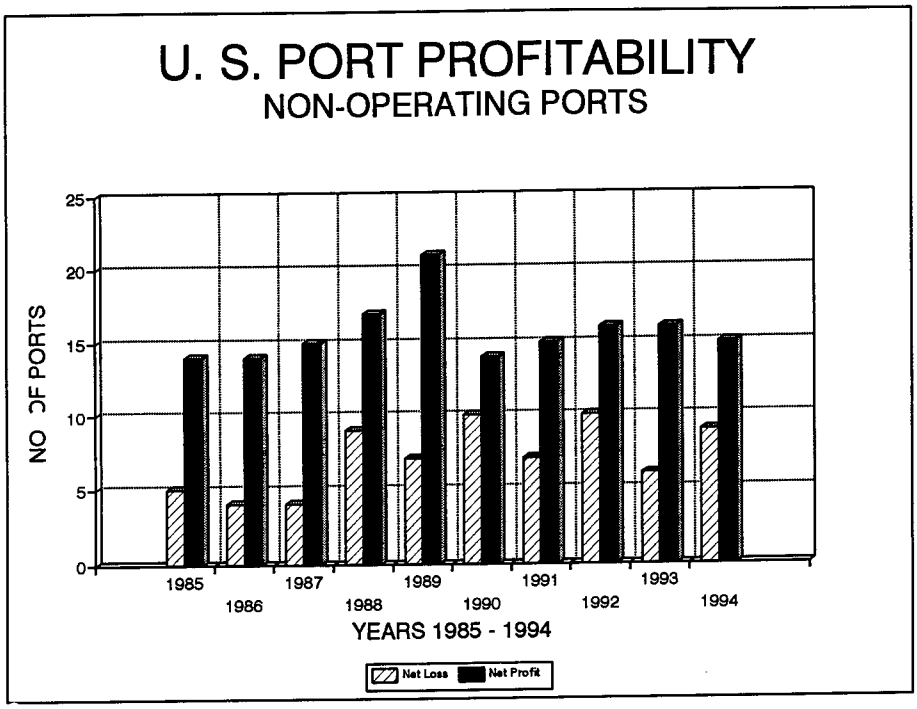


Figure 5.2

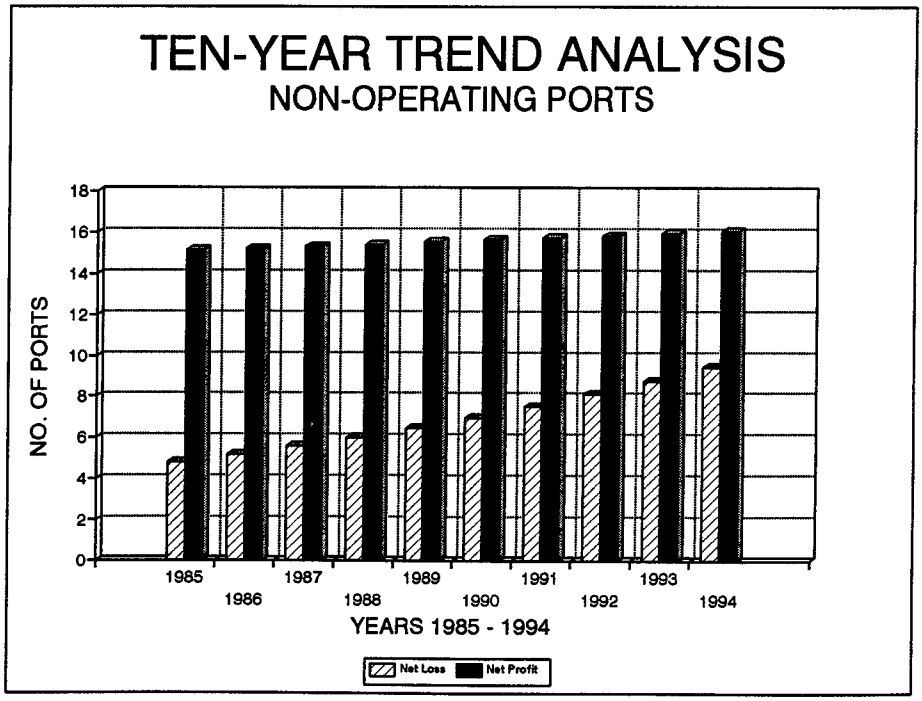
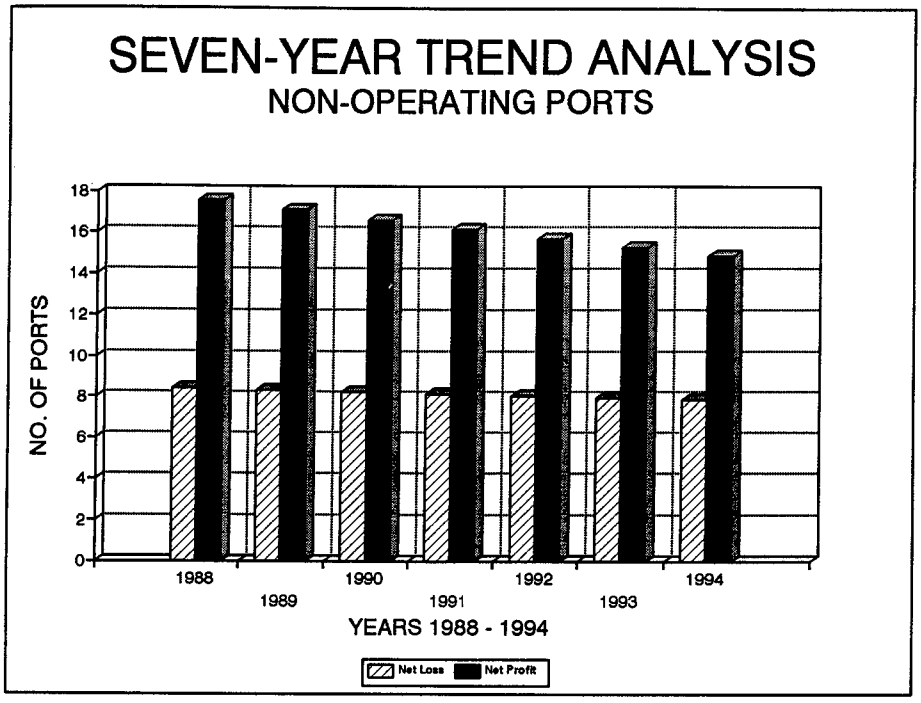


Figure 5.3



Operating Ports:

The relative profitability of operating ports for the ten-year period (1985-1994) is reflected in Table 5.2 and graphed in Figure 5.4. The number of profitable ports exceeded the number of ports not profitable in six years of the ten-year period, including each of the first four years 1985-1988.

Figure 5.5 graphs the trends in the number of profitable and non-profitable ports for the ten-year period (1985-1994), and the trends for the seven-year period (1988-1994) are graphed in Figure 5.6. Both graphs illustrate a downward trend in the number of self-sufficient ports and an increasing trend in the number of ports which are not self-sufficient.

Limited-operating Ports:

During the ten-year period the number of profitable limited-operating ports exceeded the number of non-profitable ports in each of three separate years. The number of non-profitable ports exceeded the number of profitable ports in each of five years, including the last three years of the ten-year period. See Table 5.3 and Figure 5.7 for the number of reporting ports and the related graph.

Trend analysis shows a decreasing slope curve in the number of self-sufficient ports and a rising slope trend for the number of ports which are not self-sufficient. These trends can be observed in Figure 5.8 which pictures the trends for the ten-year period (1985-1994), and in Figure 5.9, the graph for the seven-year period (1988-1994).

Table 5.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
OPERATING PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	6	11	17
1986	6	8	14
1987	4	9	13
1988	9	16	25
1989	14	10	24
1990	9	13	22
1991	10	10	20
1992	14	7	21
1993	17	6	23
1994	8	12	20

Figure 5.4

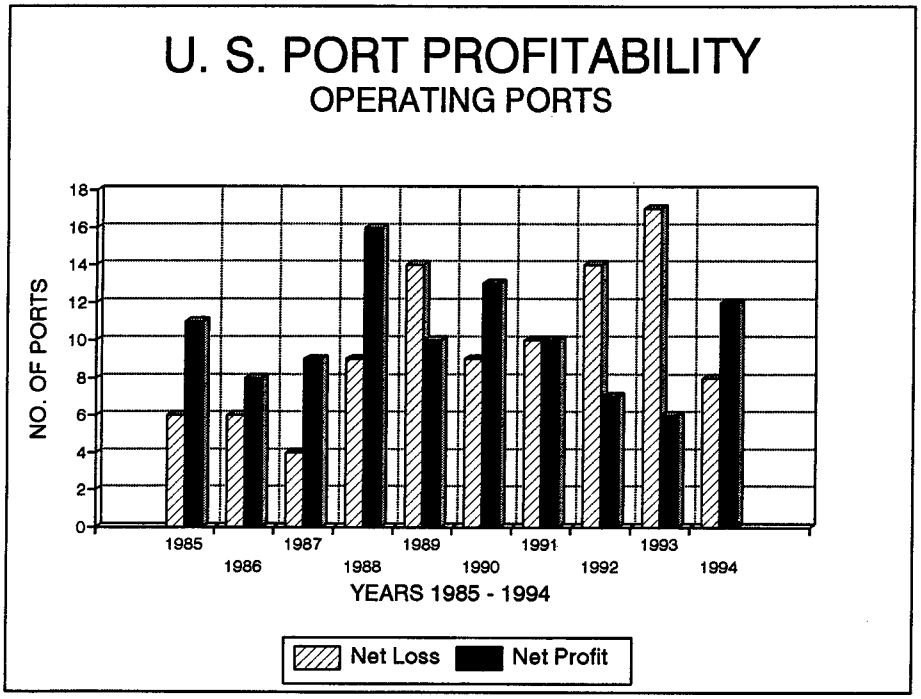


Figure 5.5

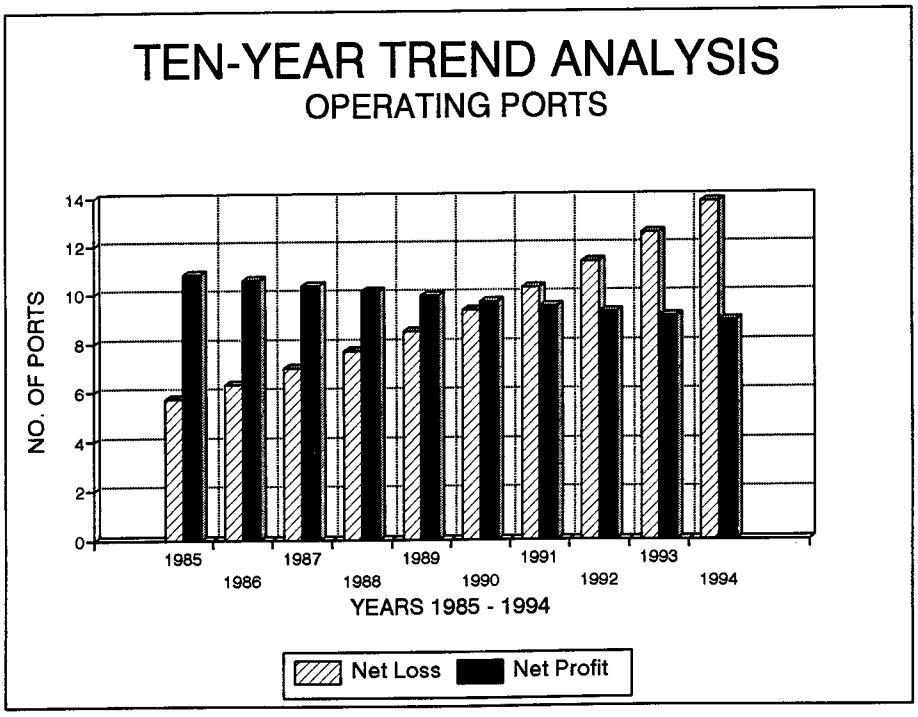


Figure 5.6

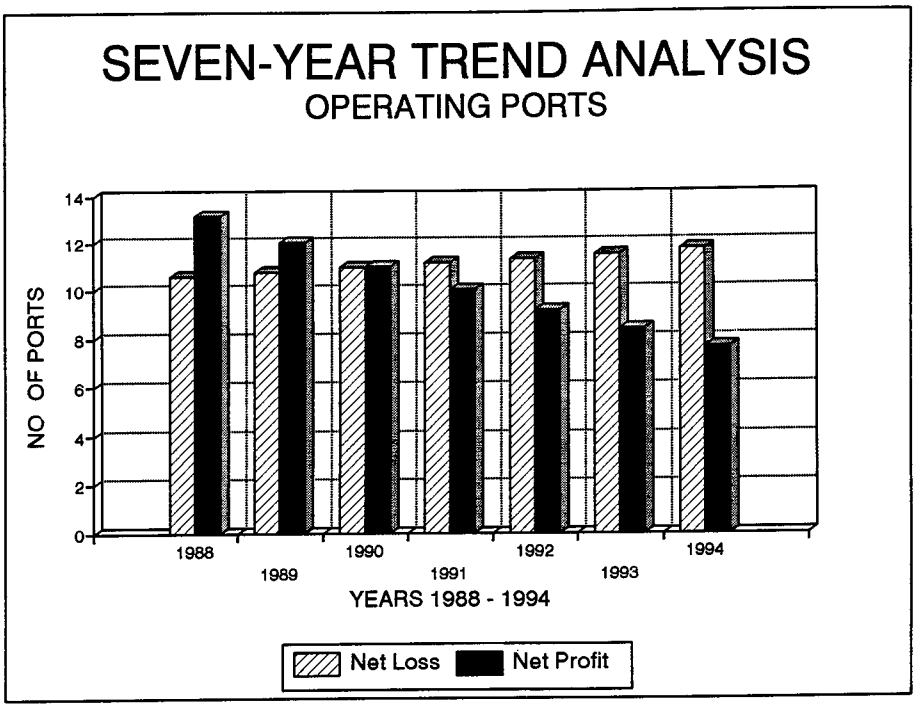


Table 5.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
LIMITED OPERATING PORTS

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	3	6	9
1986	4	4	8
1987	5	3	8
1988	4	5	9
1989	6	4	10
1990	5	5	10
1991	2	8	10
1992	7	4	11
1993	8	4	12
1994	8	3	11

Figure 5.7

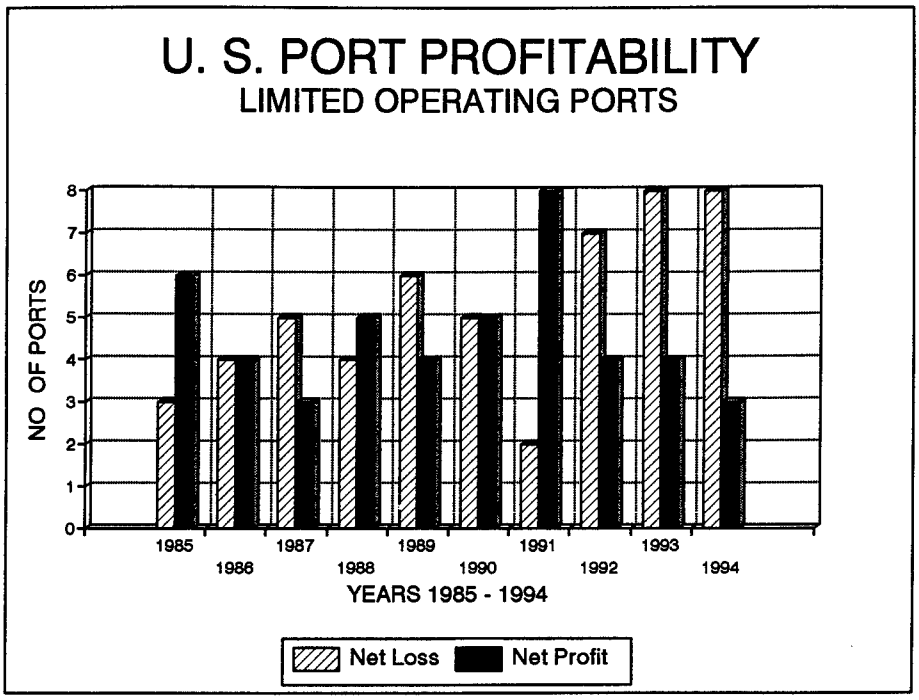


Figure 5.8

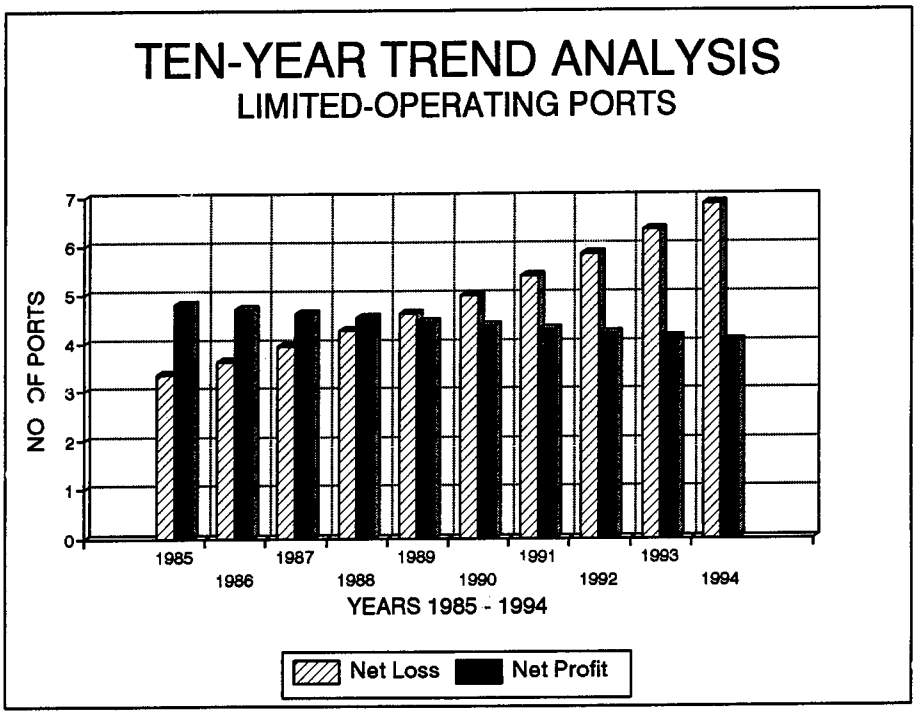
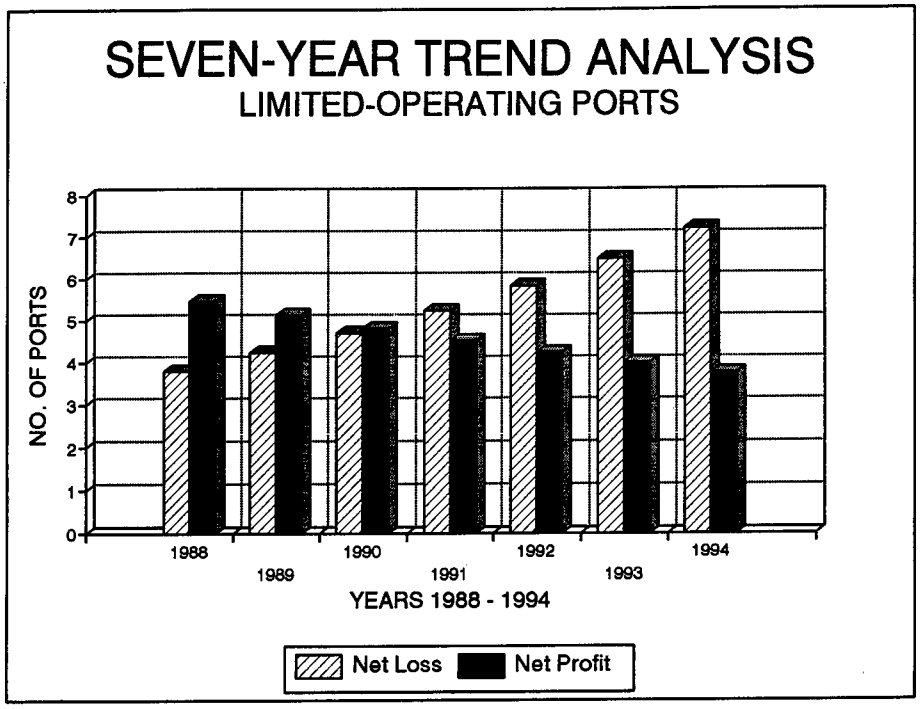


Figure 5.9



Operating Ratios and Operating Margins:

Tables 5.4 and 5.5 show the average operating ratios and operating margins for each operating category for each of five years during the ten-year period. The average operating ratio for all U.S. ports shows a range of from 77% in 1985 to 84% in 1988 and 1994. The average operating ratio for non-operating ports ranged from 66% in 1985 to 75% in 1988 and 1994. The average operating ratio for operating ports ranged between 86% in 1985 to 91% in 1990, but fell to 84% in 1994. Limited-operating ports had average operating ratios ranging from 88% in 1985 to 98% in 1988 and 95% in 1994. In 1994 the average operating ratio of all profitable U.S. ports providing survey responses (excluding the highly profitable South Pacific ports) was 86%, whereas the average operating ratio for ports not considered profitable was 107%.

Of the 30 profitable ports in 1994, 11 had operating ratios greater than the 84% average operating ratio for all ports. When added to operating income (loss), those 11 ports received sufficient income from interest earned and other sources (other than taxes and donations) to pay bond interest and other expenses and still show a net profit. This was also true for the other four years examined in detail, even though the average operating ratio varied from 77% to 84%.

In the case of non-profitable ports in 1984, the converse was true. Of the 25 non-profitable ports in 1984, only two had operating ratios lower than the average operating ratio of 84% In both cases the ports' bond interest and other expenses were greater than their income from interest earned and other sources (other than taxes and donations). This general condition was again true for the other four years examined in detail.

Based on this analysis, it appears that a port could at the present time, maintain a profitable status if it could maintain an operating ratio of 85%, provided the interest from its debt load and other expenses did not exceed its operating income plus interest income.

Table 5.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING RATIO - BY TYPE OF OPERATION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	77%	84%	82%	81%	84%
Non-operating Ports	66%	75%	70%	71%	75%
Operating Ports	86%	88%	91%	89%	90%
Limited-Operating Ports	88%	98%	93%	91%	95%

Table 5.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING MARGIN - BY TYPE OF OPERATION
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	23%	16%	18%	19%	16%
Non-operating Ports	34%	25%	30%	29%	25%
Operating Ports	14%	12%	9%	11%	10%
Limited-Operating Ports	12%	2%	7%	9%	5%

Net Return on Net Investment in Plant, Property, and Equipment:

Tables 5.6 and 5.7 show the average net return (before and after the collection of tax receipts and contributions, respectively) on net investment in plant, property, and equipment. The average net return before taxes on net investment for all ports showed a steady decline from 3.4% in 1985 to 1.3% in 1994. Each category also shows a steady decline during the ten-year period, with limited-operating ports showing a negative net return before taxes in the years 1988, 1990, and 1994.

Table 5.7, net return (after taxes) on net investment shows an average positive return in all the years charted which indicates that revenues from taxes and contributions were, on the average, sufficient to offset operating losses. However, the average annual net return after taxes showed a consistent decline over the ten-year period for all categories except limited operating ports.

Tax Receipts and Other Contributions, Donations, and Grants:

Table 5.8 displays the total taxes and contributions reported by type of operation for each of five years of the ten-year period (1985-1994). The high average annual taxes and contributions for the limited-operating ports results from large amounts reported by four large limited-operating ports. These four ports do not include the four highly profitable ports discussed in Chapter 1.

Table 5.6
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY TYPE OF OPERATION

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	3.4%	2.9%	2.7%	2.1%	1.3%
Non-operating Ports	6.0%	5.7%	5.3%	3.9%	2.2%
Operating Ports	1.2%	1.1%	1.5%	0.4%	0.7%
Limited-Operating Ports	0.3%	-0.6%	-0.5%	0.2%	-0.5%

Table 5.7
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY TYPE OF OPERATION

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	4.2%	3.9%	3.8%	3.3%	2.1%
Non-operating Ports	6.3%	5.9%	5.5%	4.4%	2.3%
Operating Ports	2.3%	1.5%	1.8%	0.9%	1.5%
Limited-Operating Ports	1.6%	2.4%	2.9%	2.9%	2.0%

Table 5.8
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVERAGE ANNUAL RECEIPT OF TAXES, CONTRIBUTIONS, DONATIONS & GRANTS
BY PORT - BY TYPE OF OPERATION
($000)

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	$915	$1,137	$1,620	$1,643	$1,301
Non-operating Ports	$491	$368	$311	$870	$233
Operating Ports	$747	$256	$358	$342	$762
Limited-Operating Ports	$2,329	$5,807	$7,538	$5,955	$4,614

CHAPTER 6

PORT PROFITABILITY BY TYPE OF AGENCY

U.S. public ports generally fall into the following categories:

Bi-state Authority
State Department, Agency, or Authority
County Department or Authority
Municipal Agency
Special Purpose Port/Navigation District or Authority

Since there was only one bi-state agency submitting financial information during the ten-year study period, its reported data will be consolidated with that of the state departments, agencies, and authorities.

The classification of the ports into the above categories is based on their current ownership and status. The statutes which establish the ports define their ownership and determine their status as departments, agencies, or separate authorities. Department and agency port directors generally report to appointed officials. Bi-state, state, county, and municipal authorities generally have appointed governing boards.

Special purpose port/navigation districts and authorities are separate local government organizations with a governing board elected or appointed in accordance with the enabling legislation which established the district. Special purpose districts/ authorities generally are granted separate taxing authority with some statutory limitations.

No attempt was made to adjust the data for any changes in port status during the ten-year study period.

The effect of the fluctuation of the number of ports responding to the finance study each year can best be judged by looking at Tables 6.1 through 6.4.

Summary:

The number of profitable ports that are state departments, agencies, and authorities has increased, while the number of unprofitable ports has decreased over the ten-year study period. This despite their average operating ratios increasing by 6% and their average net return on net investment before taxes decreasing slightly from an already unsatisfactory return level in 1985.

County departments and authorities show a mixed trend toward profitability. During the last three years of the study period, only one of three ports reported a profit. The average operating ratio has declined since 1988, but the average net return on net investment before taxes has consistently been in a negative position. Tax revenue and contributions, on the average, have not been sufficient to create a positive net return on net investment after taxes.

There are more profitable municipal ports than not, but the seven-year trend shows an increase in the average number of unprofitable ports and a decrease in the number of profitable ones. The average operating ratios, operating margins, and net return on net investment before taxes for the municipal agencies are misleading, since three highly profitable South Pacific ports are in this category. For example, the other eight municipal ports would have had an average negative operating margin and cumulative net loss for the year 1994.

Over 50% of the ports responding to the finance surveys each of the ten years were special purpose port/navigation districts. There are more unprofitable port/navigation districts than profitable, and both the ten-year and seven-year trends show an increase in the average number of unprofitable ports and a decrease in the profitable ones. This category of ports receives the highest average amount of taxes and other support.

State Department, Agency, or Authority:

The number of ports in this category as shown in Table 6.1 ranged from a low of nine in four separate years to a high of 14 in 1992.

The Figure 6.1 bar chart indicates that the profitable ports outnumber the unprofitable ports in six years of the ten-year study period, including four of the last five years.

Figure 6.2 illustrates the ten-year trend curves showing an increase in the number of profitable ports and a decrease in the number of unprofitable ports for the ten-year period (1985-1994).

Figure 6.3 identifies similar trends for the seven-year period (1988-1994).

Table 6.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
STATE OR BI-STATE PORT DEPARTMENT, AGENCY OR AUTHORITY
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	3	7	10
1986	5	4	9
1987	4	5	9
1988	7	5	12
1989	8	5	13
1990	4	7	11
1991	3	6	9
1992	4	10	14
1993	5	4	9
1994	3	7	10

Figure 6.1

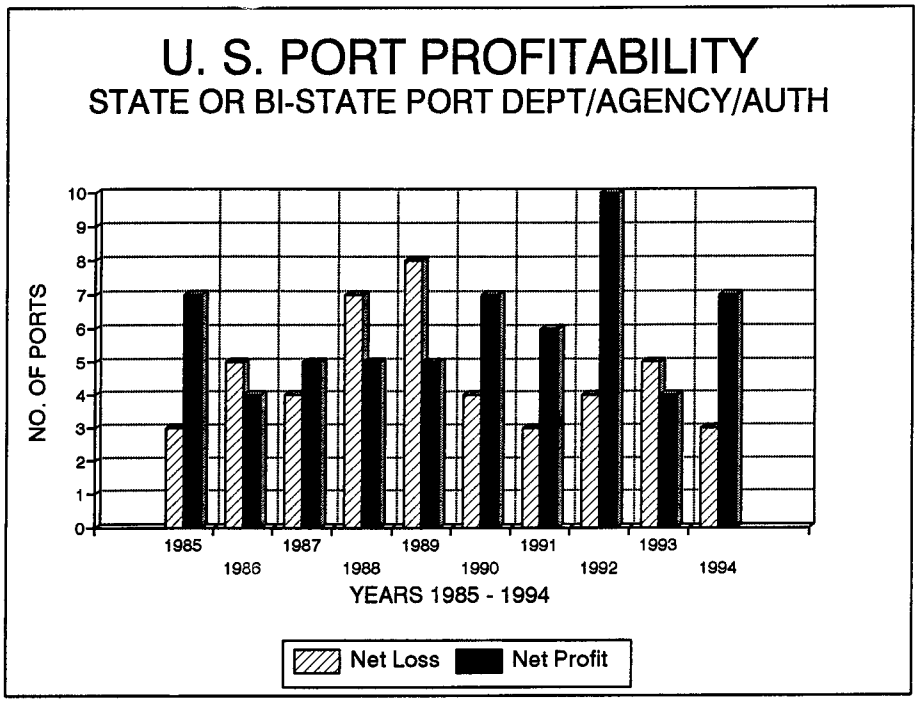


Figure 6.2

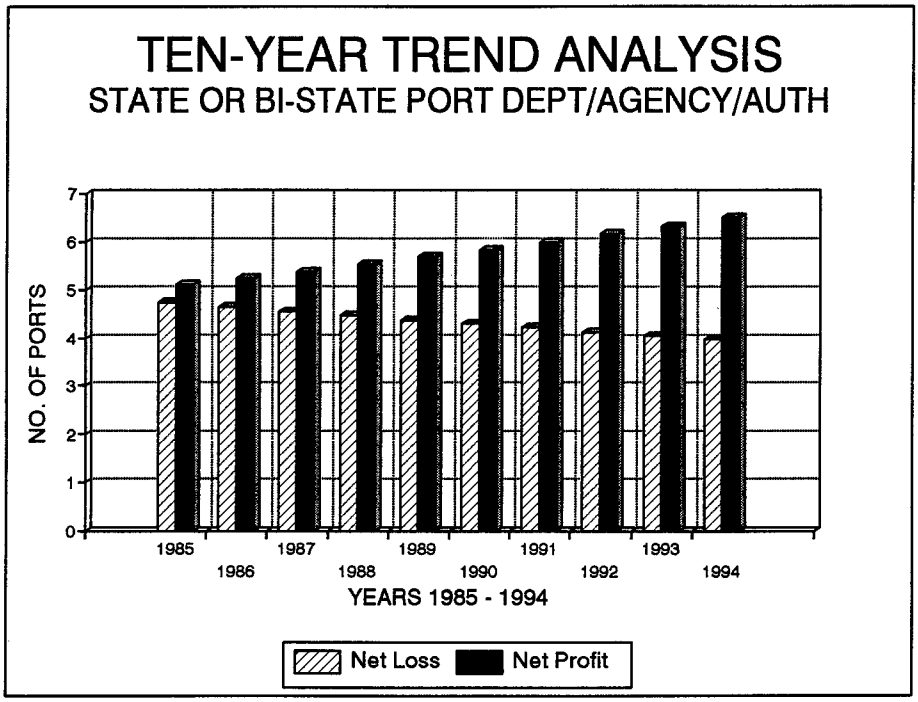
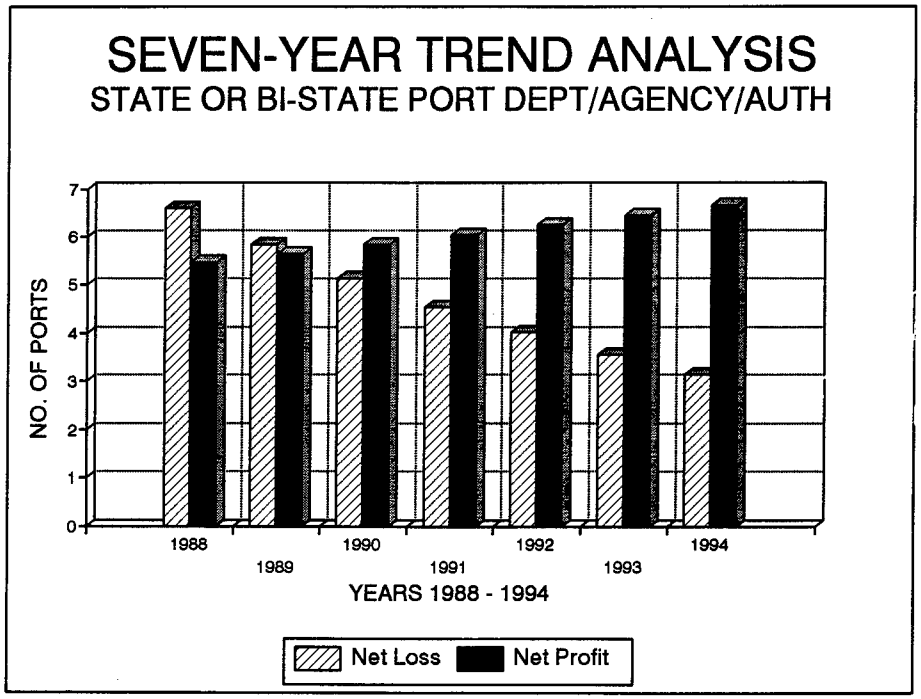


Figure 6.3



County Department or Authority:

There has been a relatively consistent survey response from ports in this category as shown in Table 6.2. There are very few ports in this category, and the maximum response in any year was only three of the four ports in this category during the study period.

Figure 6.4 indicates there were more non-profitable ports in five years of the ten-year period (1985-1994), including the last three years of the period.

The very low number of responses (from both profitable and non-profitable ports) in the first three years of the ten-year study period skew the ten-year trend analysis in Figure 6.5 causing an upward trend for profitable and unprofitable ports.

Figure 6.6, which covers the seven-year period, projects an increasing trend in the number of profitable ports and a decreasing trend in the number of unprofitable reports for the period.

The best analysis is to look at the last three years of the period, 1992, 1993, and 1994, and the responses in each year from only one profitable port and two ports that are not profitable.

Municipal Agencies:

Table 6.3 and Figure 6.7 cover municipal agencies. The survey responses ranged from a low of four ports in 1986 and 1987 to a high of 12 ports in 1989 and 1993. The number of profitable ports exceeded the number of those not profitable in eight years of the ten-year study period. In 1992, however, the number of unprofitable ports exceeded the number of profitable ones.

The ten-year trend analysis in Figure 6.8 indicates both an increase in the number of profitable and unprofitable ports. The upward trend of profitable ports is skewed by the small number of ports responding to the finance survey in two of the first three years of the ten-year study period. This graph illustrates the effect that a jump in the number of survey responses has on trend analysis using the methodology used in this study.

Figure 6.9 is the trend analysis for the seven-year period (1988-1994). It correctly projects the current trend of a decrease in the number of profitable ports and confirms the upward trend in the number of ports that are not profitable.

Table 6.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
COUNTY PORT DEPARTMENT OR AUHORITY
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	0	0	0
1986	0	1	1
1987	1	1	2
1988	3	0	3
1989	3	0	3
1990	1	1	2
1991	1	2	3
1992	2	1	3
1993	2	1	3
1994	2	1	3

Figure 6.4

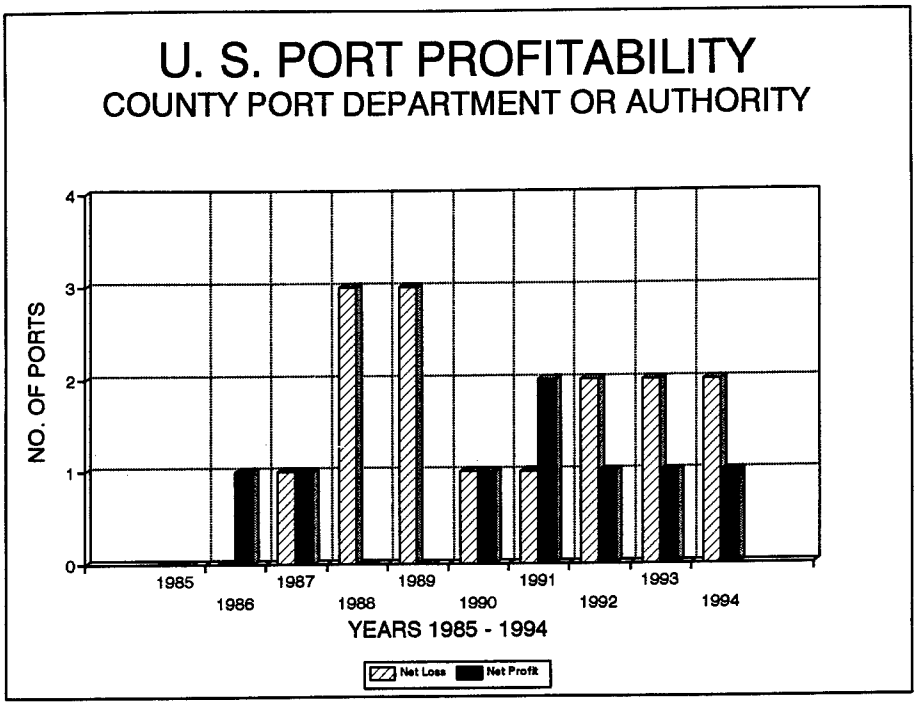


Figure 6.5

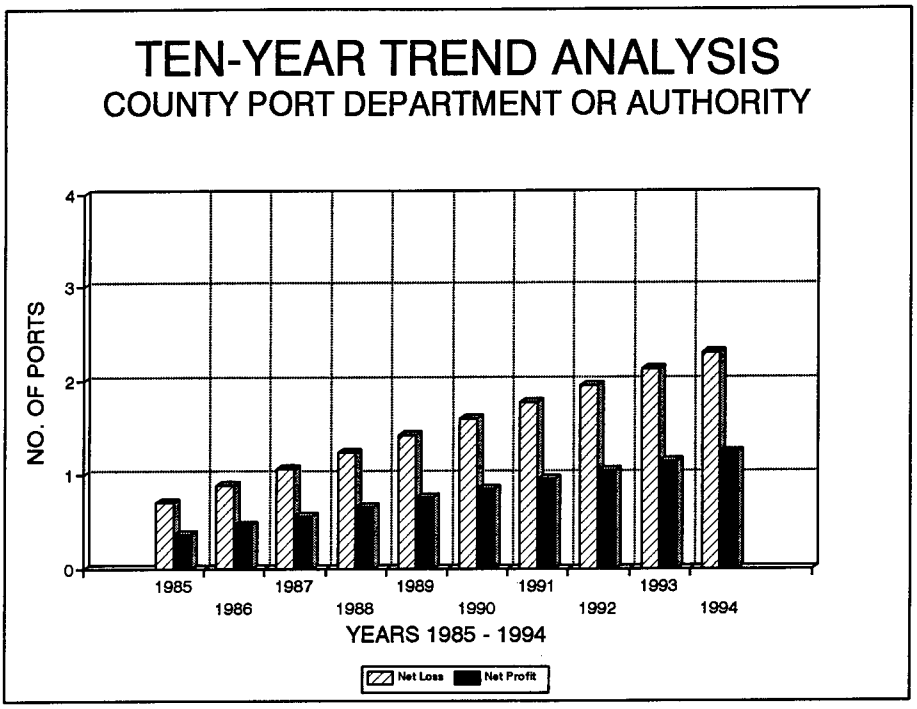


Figure 6.6

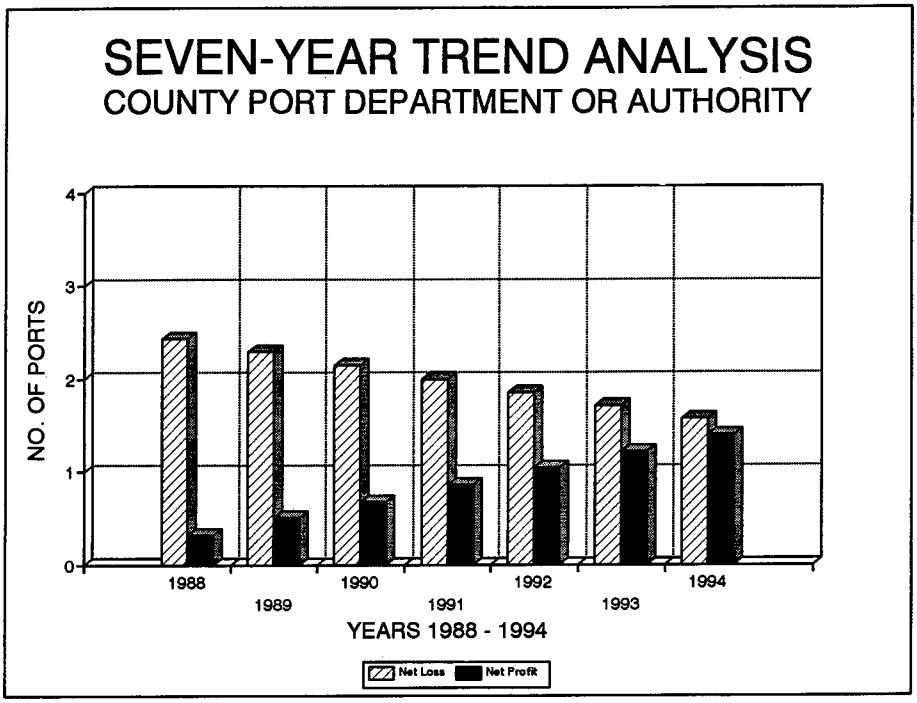


Table 6.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
MUNICIPAL AGENCY
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	4	5	9
1986	1	3	4
1987	1	3	4
1988	2	8	10
1989	4	8	12
1990	3	7	10
1991	1	7	8
1992	6	4	10
1993	6	6	12
1994	5	6	11

Figure 6.7

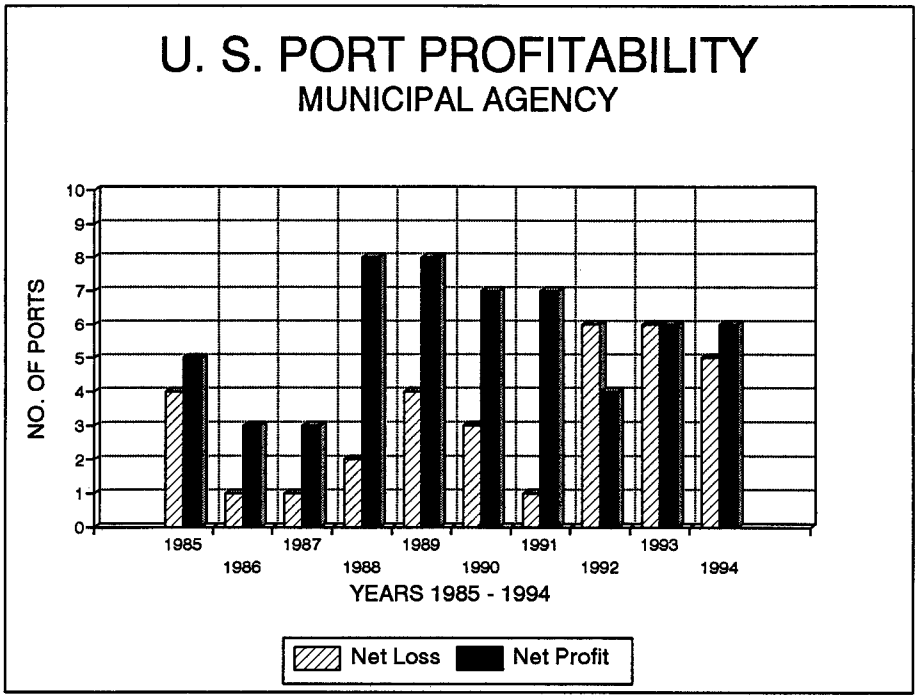


Figure 6.8

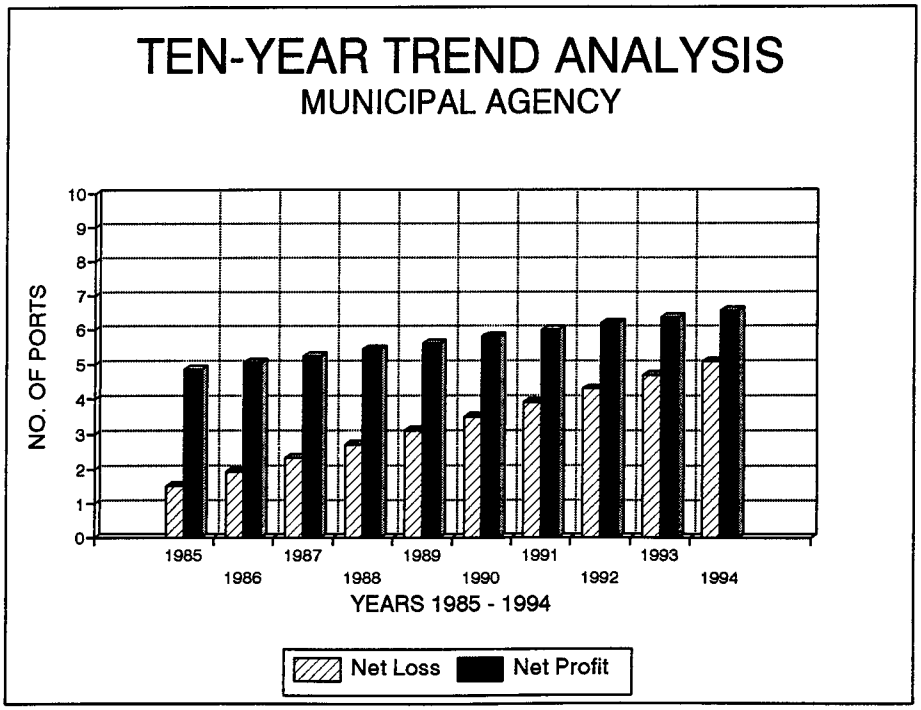
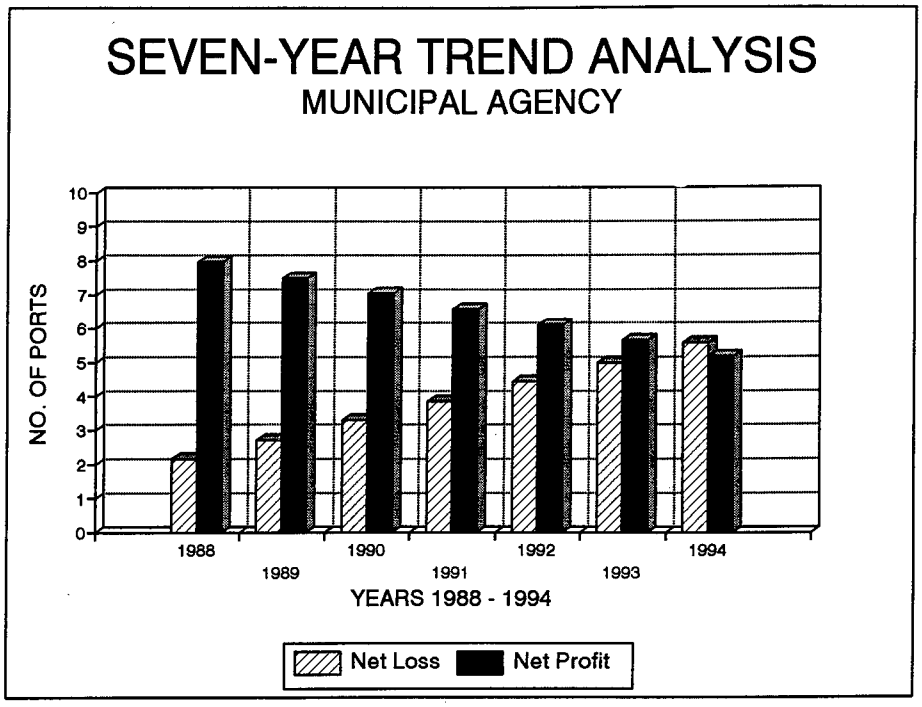


Figure 6.9



Special Purpose Port/Navigation Districts and Authorities:

During the ten-year study period over 50% of the ports responding to the AAPA port finance survey each year were special purpose port/navigation districts or authorities. This type of port agency is used extensively in the Gulf and North Pacific port regions, and a number of South Atlantic, South Pacific, and Great Lakes ports are organized in this manner.

Table 6.4 shows a relatively consistent response to the finance survey starting in 1988 when the largest number of responses was received from 35 ports in this category. The lowest number of responses was received from 25 ports in 1987, although only 26 ports responded in 1985 and 1986.

The number of profitable ports exceeded the number of unprofitable ports in eight years of the ten-year study period, including the first seven years of the period. Only in 1992 and 1993, when the smallest number of responses was received from the profitable ports, did the number of unprofitable ports exceed the number of profitable ports. This is best illustrated in Figure 6.10.

It is, therefore, not surprising that both the ten-year trend analysis shown in Figure 6.11 and the seven-year trend analysis shown in Figure 6.12 indicate a decrease in the number of profitable ports and a corresponding increase in the number of unprofitable ones.

Operating Ratios and Operating Margins:

Tables 6.5 and 6.6 contain the average operating ratios and average operating margins by type of port agency for the selected five years of the ten-year study period.

Average operating ratios have increased, with corresponding decreases in average operating margins for all agency categories except county and municipal government agencies. If revenues and expenses of three highly profitable South Pacific municipal government agencies were eliminated, the remaining municipal agencies would also have experienced an increase in the average annual operating ratio and a decrease in the average annual operating margin.

Table 6.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
SPECIAL PURPOSE PORT/NAVIGATION DISTRICT OR AUTHORITY
Based on AAPA Port Finance Surveys for the years 1995 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1985	7	19	26
1986	8	18	26
1987	7	18	25
1988	10	25	35
1989	12	22	34
1990	16	17	33
1991	14	18	32
1992	19	12	31
1993	18	15	33
1994	15	16	31

Figure 6.10

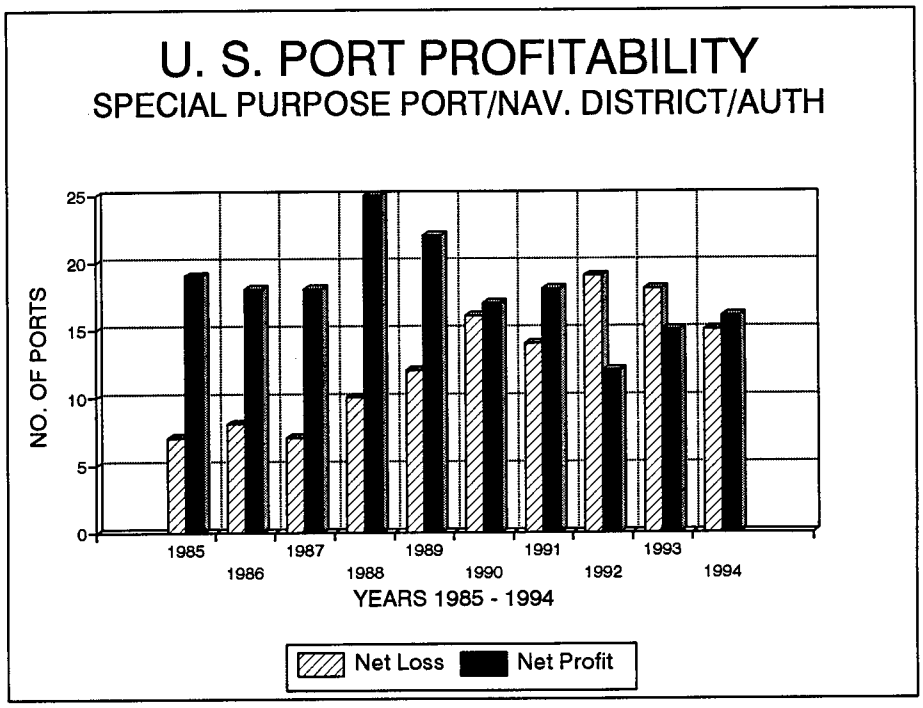


Figure 6.11

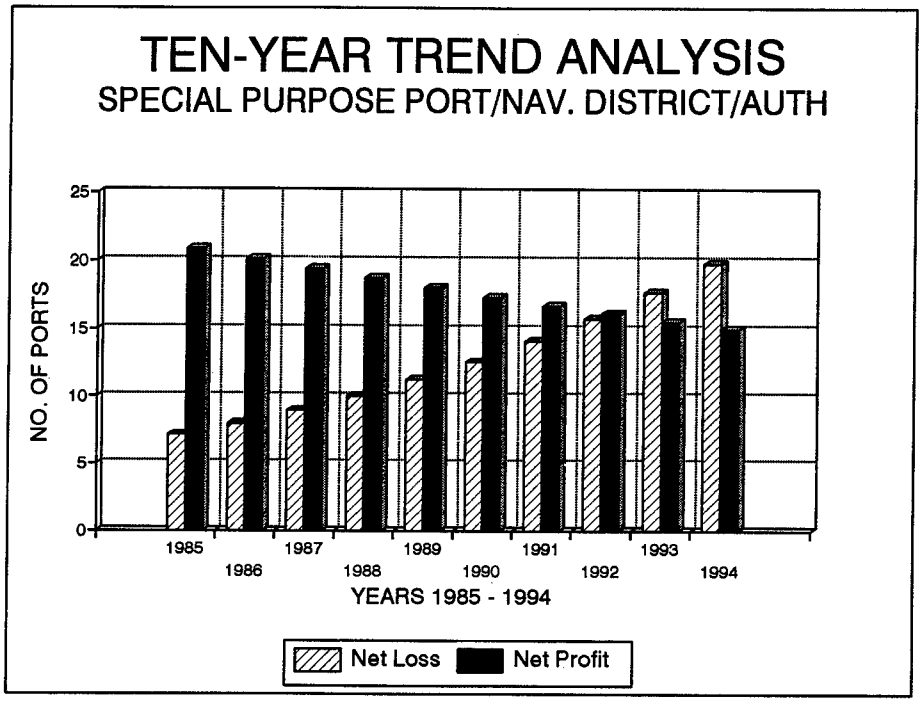


Figure 6.12

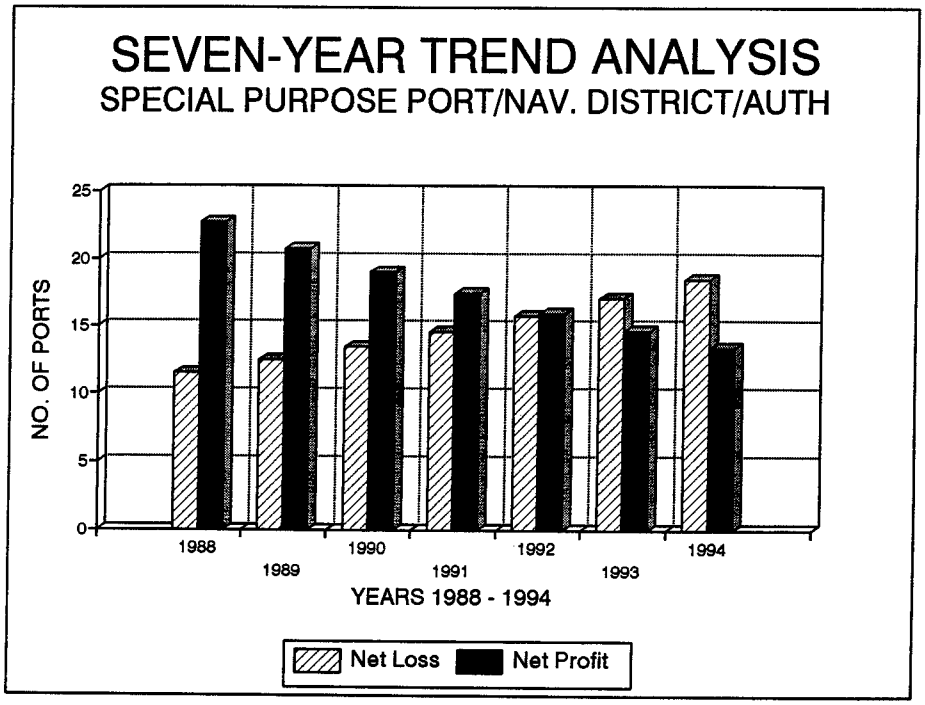


Table 6.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING RATIO - BY TYPE OF AGENCY
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	77%	84%	82%	81%	84%
State Department, Agency or Authority	85%	91%	93%	91%	89%
County Department, Agency or Authority	--	84%	84%	71%	74%
Municipal Agency	59%	53%	51%	55%	62%
Special Purpose Port/ Navigation District/Auth.	87%	94%	91%	90%	95%

Note: Does not include bi-state port authorities.

Table 6.6
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
SELECTED YEARS BETWEEN 1985 - 1994
AVE. OPERATING MARGIN - BY TYPE OF AGENCY
Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	23%	16%	18%	19%	16%
State Department, Agency or Authority	15%	9%	7%	9%	11%
County Department, Agency or Authority	--	16%	16%	29%	26%
Municipal Agency	41%	47%	49%	45%	38%
Special Purpose Port/ Navigation District/Auth.	13%	6%	9%	10%	5%

Note: Does not include bi-state port authorities.

Net Return on Net Investment in Plant, Property, and Equipment:

Tables 6.7 and 6.8 illustrate the average net return (before and after tax receipts and other contributions, respectively) on net investment for each agency category in each of the five years indicated. The average net return on net investment before taxes show a decline over the period for all categories. Only the average return before taxes of the municipal agencies is satisfactory, despite the decline below 6% in 1994. County departments, agencies, and authorities have experienced an average annual negative net return before taxes which was not offset by the receipt of taxes and contributions in three of the four years studied (the exception being 1992).

Tax Receipts and Other Contributions, Donations, and Grants:

Table 6.9 shows that the amount of average annual support from taxes and other contributions has increased since 1985 in all categories but municipal agencies. The negative amount shown for municipal agencies in 1994 results from a payment from a port to its municipal owner which was accounted for as a negative contribution.

The amount of average annual support from taxes and other contributions is highest for special purpose port/navigation districts followed by state department, agency, or authority ports.

Table 6.7
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY TYPE OF AGENCY

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	3.4%	2.9%	2.7%	2.1%	1.3%
State Department, Agency or Authority	1.1%	0.4%	1.0%	0.7%	0.8%
County Department, Agency or Authority	--	-1.4%	-2.1%	-0.6%	-1.2%
Municipal Agency	5.7%	6.9%	9.2%	6.9%	4.3%
Special Purpose Port/ Navigation District/Auth.	3.5%	2.4%	1.3%	0.2%	0.1%

Note: Does not include bi-state port authorities.

Table 6.8
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY TYPE OF AGENCY

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	4.2%	3.9%	3.8%	3.3%	2.1%
State Department, Agency or Authority	1.4%	1.4%	1.9%	1.4%	1.4%
County Department, Agency or Authority		-0.9%	-1.8%	0.4%	-0.5%
Municipal Agency	5.8%	7.0%	9.2%	6.9%	4.1% **
Special Purpose Port/ Navigation District/Auth.	5.2%	4.1%	3.4%	3.0%	2.6%

Notes: * Does not include bi-state port authorities.
** Payment by municipal port to city treated as negative contribution.

Table 6.9
U. S. PORT PROFITABLITY
SELECTED YEARS BETWEEN 1985 - 1994
AVERAGE ANNUAL RECEIPTS FROM TAXES, CONTRIBUTIONS, DONATIONS & GRANTS
BY PORT - BY TYPE OF AGENCY
($000)

Based on AAPA Port Finance Surveys for the years 1985 - 1994

Description	1985	1988	1990	1992	1994
All Ports	$955	$1,137	$1,620	$1,643	$1,301
State Department, Agency or Authority*	$566	$1,556	$1,914	$991	$1,700
County Department, Agency or Authority	**	$394	$438	$1,127	$966
Municipal Agency	$143	$105	$33	$0	($820)
Special Purpose Port/ Navigation District/Auth.	$1,408	$1,394	$2,133	$2,550	$2,012

Note: *Does not include bi-state port authorities.
**No county agency or authority response in this year.

CHAPTER 7

PORT PROFITABILITY BY STRATEGIC PLANNING

There should be a correlation between strategic planning and profitability. To determine if such relationship does exist, the extent of port planning was measured and compared with profitability.

The extent of planning was determined from a 1992 AAPA survey and updated as of the year 1992 where appropriate. Planning categories included:

Strategic Plan
Five-year financial plan
Five-year development plan
Combinations of the above
No plan

The period analyzed included only the years 1992, 1993, and 1994. Because planning data were available for only three years, no attempt was made to measure trends.

Summary:

It is not surprising that ports with a strong emphasis on long range planning appear to be more profitable and self-sufficient than ports that do limited or no planning. The limited amount of data makes it impossible to do any meaningful trend analysis.

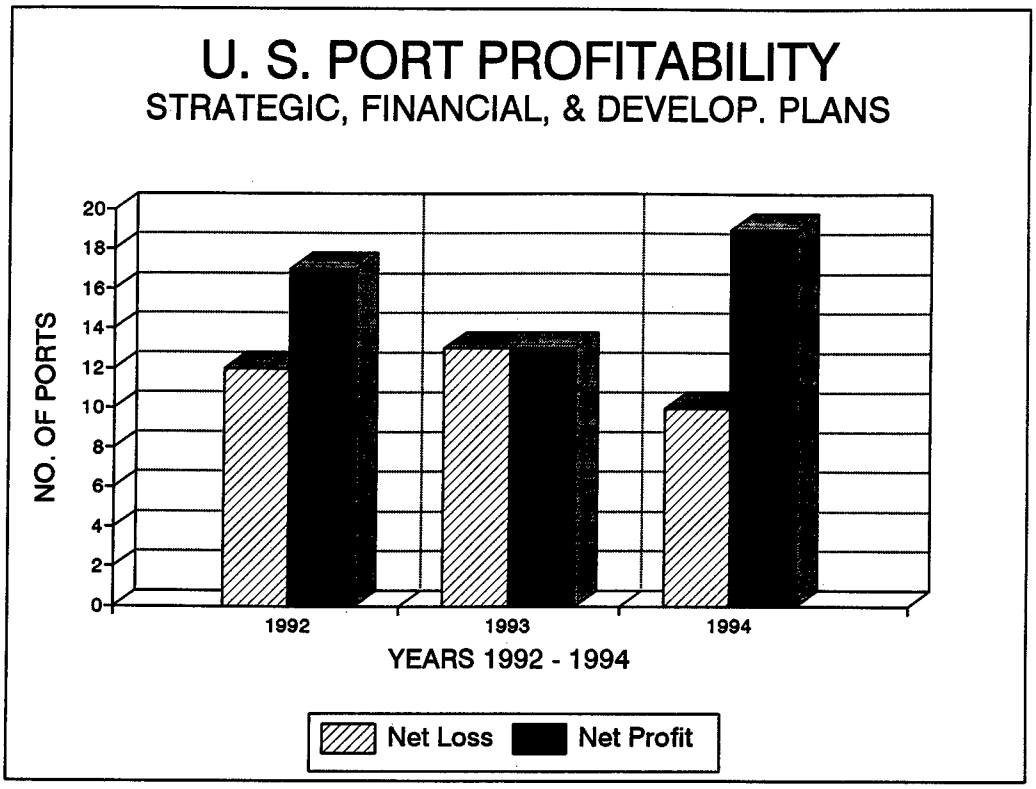
Analysis:

Table 7.1 includes ports having strategic plans, financial plans, and development plans (defined as "extensive planning"). Figure 7.1 is a bar chart reflecting the data in Table 7.1. Most of the major U.S. ports are included in this category including the four very profitable South Pacific ports. It appears that ports doing extensive planning fare better than ports which do not, although many other factors may affect profitability. This is illustrated by the relative percentages of profitable ports doing extensive planning compared with the percentage of all profitable ports reporting financial data to AAPA.

Table 7.1
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1985 - 1994
STRATEGIC, FINANCIAL AND DEVELOPMENT PLANS
Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	12	17	29
1993	13	13	26
1994	10	19	29

Figure 7.1



Profitable Ports

Year	Extensive Planning	All U.S. Ports
1992	59%	47%
1993	50%	46%
1994	66%	55%

Table 7.2 and Figure 7.2 show the relative profitability of ports having just strategic and financial plans. The available data are inconclusive.

Table 7.3 and Figure 7.3 show the relative profitability of ports having only strategic plans and development plans. These data indicate that the majority of ports with these two plans were not profitable, but there are not enough reporting ports in this category to reach a reliable conclusion.

Table 7.4 and Figure 7.4 chart and graph the relative profitability of ports with financial and development plans. This sample is also not large enough to reach a reliable conclusion.

Table 7.5 and Figure 7.5, which also reflect small data samples, indicate that having only a strategic plan does not necessarily enhance profitability.

The relative profitability of ports with only development plans is charted and graphed in Table 7.6 and Figure 7.6, respectively, but since there are only a small number of ports in this category no conclusion can be drawn.

Table 7.7 and Figure 7.7 show that most ports that do no long range planning are not profitable.

The following additional tables show certain ratios by extent of planning:

Table 7.8	Operating Ratio
Table 7.9	Operating Margin
Table 7.10	Net Return (before taxes)
Table 7.11	Net Return (after taxes)

Ports with the most extensive planning appear to have the lowest operating ratios, the highest operating margins, and the best net return on net investment in plant, property, and equipment. It also appears that having a strategic plan alone, without further planning, does not enhance profitability.

Table 7.2
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
STRATEGIC AND FINANCIAL PLANS
Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	1	1	2
1993	1	1	2
1994	3	2	5

Figure 7.2

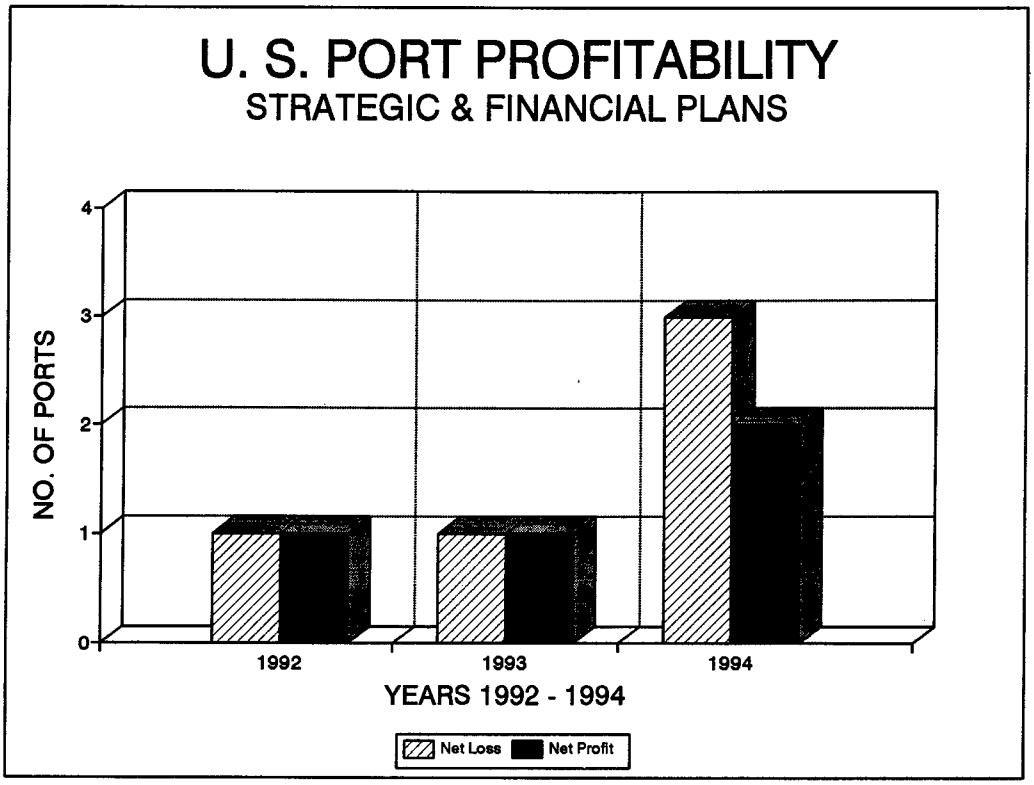


Table 7.3
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
STRATEGIC AND DEVELOPMENT PLANS

Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	4	3	7
1993	5	2	7
1994	3	2	5

Figure 7.3

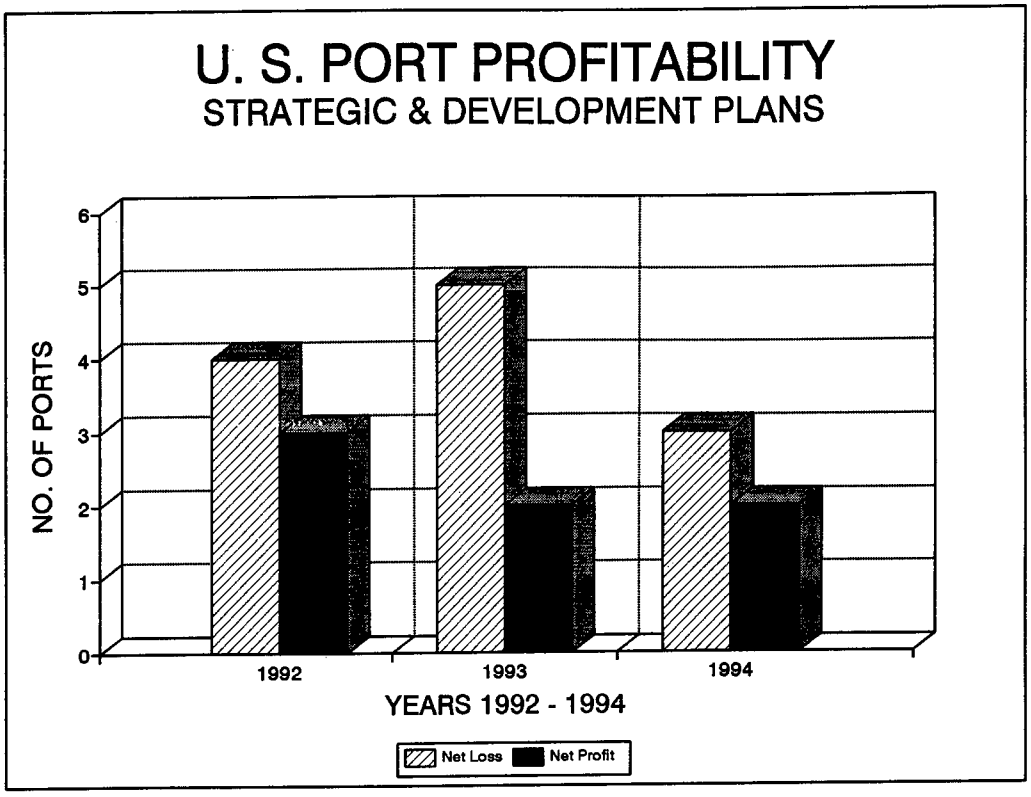


Table 7.4
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
FINANCIAL & DEVELOPMENT PLANS
Based on AAPA Port Finance Surveys for the years 1992 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	1	2	3
1993	2	1	3
1994	0	2	2

Figure 7.4

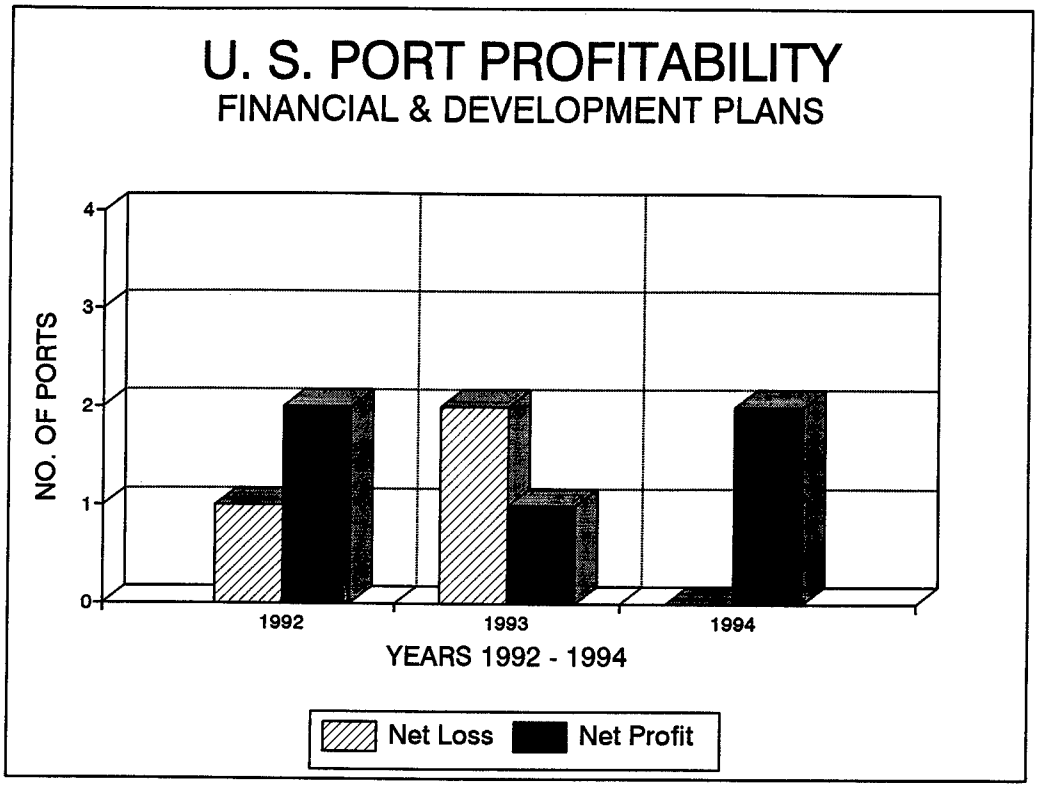


Table 7.5
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
STRATEGIC PLAN ONLY

Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	3	1	4
1993	3	3	6
1994	5	1	6

Figure 7.5

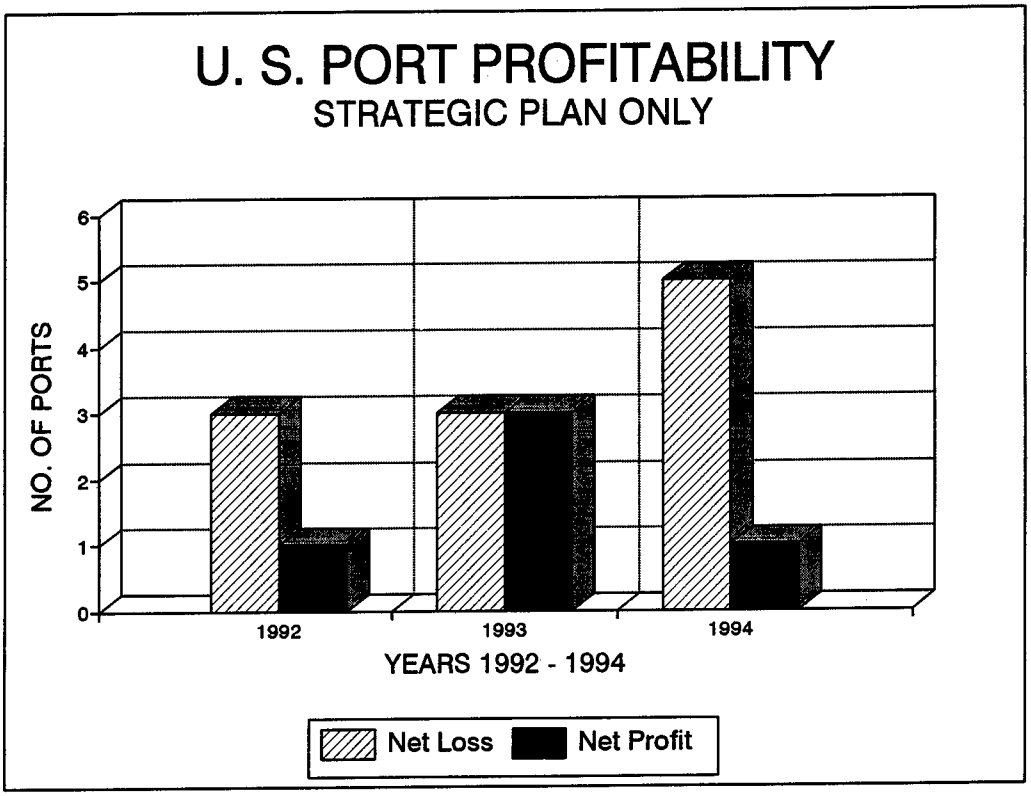


Table 7.6
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
DEVELOPMENT PLAN ONLY
Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	1	0	1
1993	1	1	2
1994	0	2	2

Figure 7.6

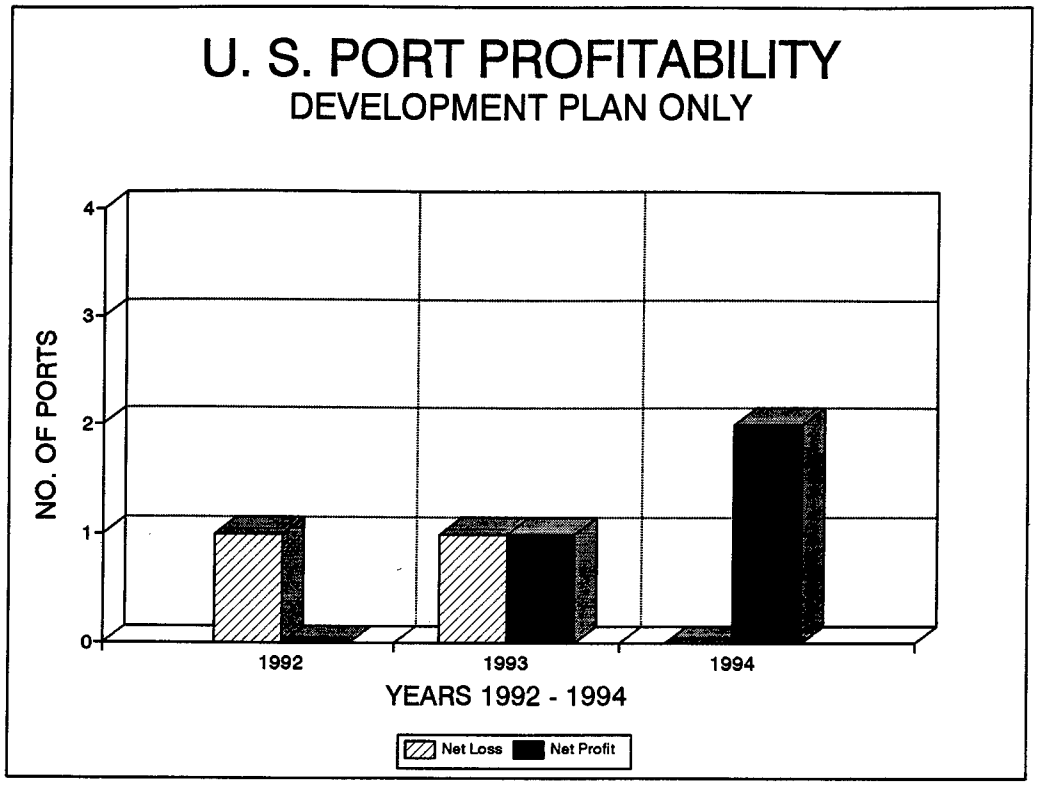


Table 7.7
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
NO PLANNING

Based on AAPA Port Finance Surveys for the years 1992 - 1994

Year	Net Loss Before Taxes & Contributions	Net Profit Before Taxes & Contributions	Total
1992	9	2	11
1993	6	5	11
1994	7	3	10

Figure 7.7

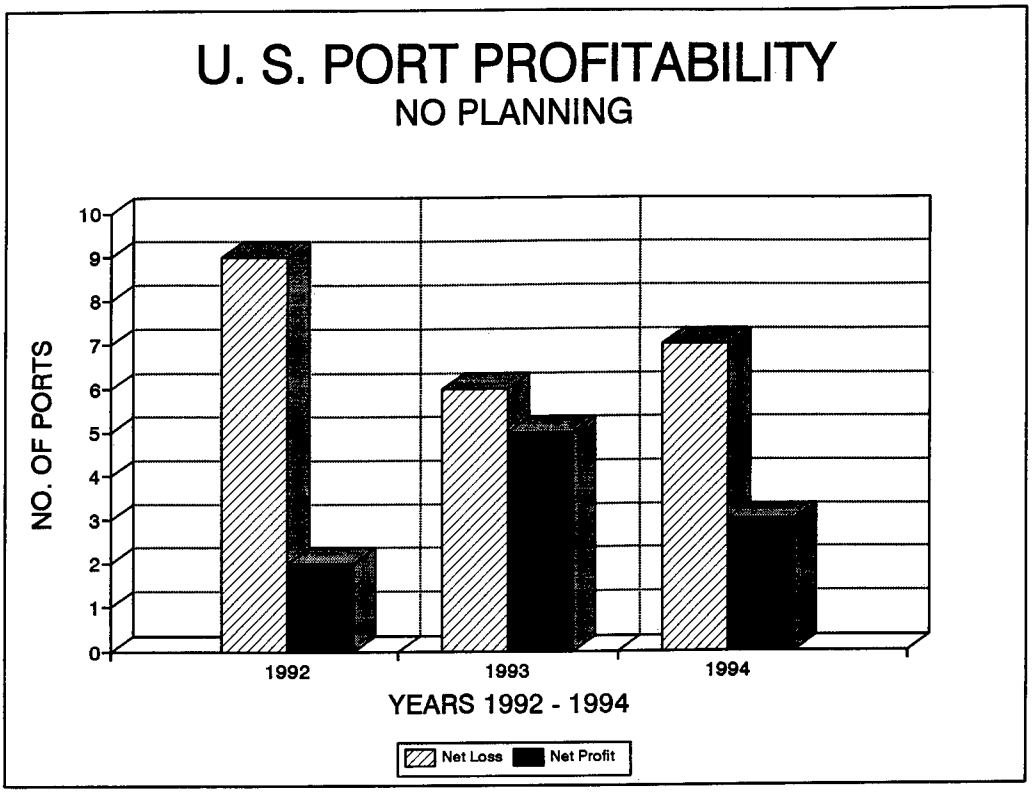


Table 7.8
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
AVE. OPERATING RATIO - BY EXTENT OF PLANNING
Based on AAPA Port Finance Surveys for the years 1992 - 1994

Description	1992	1993	1994
All Ports	81%	84%	84%
Strategic, Financial & Development Plans	80%	80%	80%
Strategic & Financial Plans	89%	81%	**
Strategic & Development Plans	90%	97%	91%
Financial & Development Plans	70%	77%	82%
Strategic Plan only	89%	171% *	192% *
None	98%	90%	97%

Note: *Distorted by one port's loss in excess of $20 million.
**No reporting ports in this category.

Table 7.9
U. S. PORT PROFITABLITY
BEFORE TAXES AND CONTRIBUTIONS
1992 - 1994
AVE. OPERATING MARGIN - BY EXTENT OF PLANNING
Based on AAPA Port Finance Surveys for the years 1992 - 1994

Description	1992	1993	1994
All Ports	19%	16%	16%
Strategic, Financial & Development Plans	20%	20%	20%
Strategic & Financial Plans	11%	19%	**
Strategic & Development Plans	10%	3%	9%
Financial & Development Plans	30%	23%	18%
Strategic Plan only	11%	-71% *	-92% *
None	2%	10%	3%

Note: *Distorted by one port's loss in excess of $20 million.
**No reporting ports in this category.

Table 7.10
U. S. PORT PROFITABLITY
1992 - 1994
AVE. NET RETURN (BEFORE TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY EXTENT OF PLANNING

Based on AAPA Port Finance Surveys for the years 1992 - 1994

Description	1992	1993	1994
All Ports	2.1%	1.6%	1.3%
Strategic, Financial & Development Plans	2.8%	2.8%	2.0%
Strategic & Financial Plans	0.4%	3.4%	**
Strategic & Development Plans	-0.1%	-1.5%	-1.0%
Financial & Development Plans	1.0%	-0.2%	1.9%
Strategic Plan only	-0.9%	-7.4%	-8.7%
None	0.5%	1.8%	0.4%

Note: **No reporting ports in this category.

Table 7.11
U. S. PORT PROFITABLITY
1992 - 1994
AVE. NET RETURN (AFTER TAX RECEIPTS & CONTRIBUTIONS)
ON NET INVESTMENT IN PLANT, PROPERTY & EQUIPMENT
BY EXTENT OF PLANNING

Based on AAPA Port Finance Surveys for the years 1992 - 1994

Description	1992	1993	1994
All Ports	3.3%	2.2%	2.1%
Strategic, Financial & Development Plans	3.5%	2.6%	2.5%
Strategic & Financial Plans	0.4%	3.4%	**
Strategic & Development Plans	0.4%	1.3%	0.2%
Financial & Development Plans	4.8%	5.2%	1.9%
Strategic Plan only	-0.3%	-6.4%	-6.8%
None	0.5%	1.8%	0.4%

Note: **No reporting ports in this category.